

***Vermont Health Information Technology Plan
(VHITP)***

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Draft for Public Comment



**Vermont State Agency of Human Services,
Department of Vermont Health Access, Division of Health Care Reform**



Vermont Information Technology Leaders, Inc.

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i. Vermont HIT Plan in Context:

The summer 2010 revision of the *Vermont Health Information Technology Plan* (VHITP) incorporates the collaborative efforts of VITL, state policy makers, administrative officials, and a broad cohort of health care providers, professionals, and consumers, all of whom see the critical importance of placing HIT and HIE at the center of Vermont's health reform vision. This fourth edition of the VHITP responds to the following state and federal requirements:

18 V.S.A. chapter 219 § 9351, added through Act 61 of 2009, requires the overall coordination of Vermont's "statewide health information technology plan." That function is now being done by the Department of Vermont Health Access (DVHA), Division of Health Care Reform. Vermont statute requires that the plan

"shall include the implementation of an integrated electronic health information infrastructure for the sharing of electronic health information among health care facilities, health care professionals, public and private payers, and patients. The plan shall include standards and protocols designed to promote patient education, patient privacy, physician best practices, electronic connectivity to health care data, and, overall, a more efficient and less costly means of delivering quality health care in Vermont."

The American Recovery and Reinvestment Act (ARRA) of 2009, Title XIII – Health Information Technology, Subtitle B—Incentives for the Use of Health Information Technology, Section 3013, State Grants to Promote Health Information Technology – State Health Information Exchange Cooperative Agreement Program requires each state to produce and submit Strategic and Operational Plans as a condition of funding. This Plan is designed to meet the Office of the National Coordinator for Health Information Technology (ONC) guidance for the Strategic and Operational Planning document required as a condition of the State's Section 3013 HIE Cooperative Agreement and as further articulated in ONC Policy Information Notice (PIN) HIE – 001.

In addition, ARRA and the September 1, 2009 State Medicaid Directors Letter (SMD #09-006) from the Centers for Medicare and Medicaid Services (CMS) charge states with development of a State Medicaid HIT Plan (SMHP) as a condition of Federal financial participation (FFP) related to state implementation of and expenditures related to implementation and administration of the incentive payment program authorized by Section 4201 of ARRA and pursuing "initiatives to encourage adoption of certified EHR technology to promote health care quality and the exchange of health care information."

Communication from ONC and CMS stress the collaborative approach both are taking with respect to planning, funding, and implementation of state-level HIT and HIE policy. Vermont's approach to HIT-HIE implements a fully integrated approach and methodology, including the co-location of the ONC-required State HIT Coordinator within DVHA, the State Medicaid Agency.

It is anticipated that both this plan and the SMHP will be evolving documents of significant breadth and scope. For purposes of articulating an integrated vision of state HIT and HIE policy, Vermont's SMHP is a "chapter" of the VHITP. As such, sections of the SMHP in draft form are integrated into this planning document to underscore the programmatic integration of State HIT-HIE policy with Medicaid and the delivery system reforms overseen by the Division of Health Care Reform.

ii. Preface to the fourth edition of the VHITP.

The health care environment has been evolving rapidly since 2005, the year the Vermont legislature and the Governor had the insight to set a policy vision for development of Health Information Technology (HIT) and called for the original State plan. The first edition of the *Vermont Health Information Technology Plan*, published July 1, 2007 after an 18 month public / private engagement with diverse stakeholders in over 30 public meetings, was itself visionary, and won national praise from then ONC Director Dr. David Brailer.

The landscape has continued to evolve, but the vision for implementation and meaningful use of HIT remains a constant in Vermont's efforts to reform and transform health care delivery systems, in many ways anticipating the HIT policy vision enacted in the HITECH Act section of ARRA. A second edition of the VHITP was worked on throughout 2008 and completed just before the passage of ARRA.

That second edition was not published because portions were made obsolete by the new resources and expectations introduced by the HITECH Act and because of the transition of responsibility for state HIT planning from VITL to the State enacted in Act 61 of 2009. Act 61 also revised Vermont's HIT policy statute to mirror the federal policy standards established in the HITECH Act. A third edition of the VHITP was published in October 2009 as part of the process of applying for ONC HIE Cooperative Agreement funding, after an additional stakeholder engagement process.

The same summer that the first VHITP was published, Dr. Craig Jones moved to Vermont to direct the Vermont Blueprint for Health and develop its innovative, integrated, HIT-assisted care model (articulated in Act 71 of 2007). This fourth edition of the VHITP coincides with the passage of Act 128 of 2010, which codifies Vermont's delivery system reforms Blueprint, in which HIT plays a fundamental, pivotal role.

Through Act 128, the Blueprint for Health – an integrated approach to patient centered medical homes, community health teams, and multi-insurer participation in structural payment reforms to primary care – is scheduled to expand statewide between July 1, 2011 and October 1, 2013. That Blueprint expansion time line is consistent with and complementary to the federal time line for implementation of the staged criteria for meaningful use of HIT.

As such, Vermont has the opportunity – and in this document, the plan – for transforming its health care delivery system into a comprehensively integrated, digitally powered, distributed learning network of health information to improve the quality, safety, and connectedness of care.

We are building a network that connects doctors to patients, doctors to doctors, and patients to patients. There will be a time, not as distant from now as many might think, when each of us – every patient who wants to – can have an on-line "medical life" as rich and varied as our on-line social lives and business lives.

We'll use email to schedule appointments and refill prescriptions, and once our clinicians are paid for their time to do it, we'll have electronic consultations and "visits" with them. We'll have a personal health record (PHR), where all the information from all of our encounters with health care – hospitalizations, tests, lab results, visits to doctors and specialists – can reside, and we can set it up to have new data fed there automatically as the world of health care gets wired up.

There are already hundreds, if not thousands, of iPhone and other mobile computing apps related to health care, personal wellness, diet, exercise, medications, as well as many other Health 2.0 applications and services that enable consumers to customize their e-medical lives.

As a state, Vermont's vision is to architect and build an infrastructure to support this transformative system of care, to support both Health Information Exchange the noun and Health Information Exchange the verb. It's not an either / or. HIE is both noun *and* verb. VITL operates the Vermont HIE network. That's the state HIE (noun). But VITL, and many, many other players, participate in the verb form of HIE.

It's worth noting that this is a significant evolution. Historically (i.e., a couple of years ago), the paradigm for the exchange of health information was primarily that it takes place through a "secure tube" or virtual private network (VPN), which utilizes the infrastructure of the internet but is not part of the open, public internet.

There are technical standards and protocols for the exchange of health information through VPNs – which much of this plan is about detailing – but increasingly, the public internet is being seen as a vehicle for exchanging health information, both doctor to doctor and doctor to patient. (Thus, this plan now incorporates that evolution.) Through development of national point-to-point (email-like) standards for transport, security, privacy, and identity management and authentication, we will soon be living in a "both / and" exchange environment, where health data will flow (again, with proper security and privacy protocols) across the public *and* private internets. It is "data liquidity" that is key.

This ubiquitous, secure exchange (the verb) of health information will in turn help power the transformation of the delivery system, because it will allow for connections to be made across domains where communication currently breaks down. Whether it is to prevent adverse medication reactions with critical life safety implications or to enhance transitions from one care setting to another (hospital to rehab to home, for instance), HIE will help to defragment and unify our systems of care.

HIE will also empower real patient-centeredness, as it puts individuals on an even footing with health professionals in the communication about their own health and health care needs. While somewhat destabilizing, given medicine's traditional model of information control, the broad exchange of health information is the tool consumers can, and very likely will, use to empower themselves in the decisions about their own care. The challenge is to maintain medical records that are unbiased by self-reporting or self-selection (that are in fact enhanced by aggregating all the "official" medical data generated by the diverse providers serving a given individual, collected in the EHR at their medical home) while enriching health information available to consumers and enabling its access and use through PHRs.

With the passage of the Affordable Care Act (ACA), we have embarked as a nation on an exciting new phase of health system transformation, and the work being done in each state because of the HITECH Act provides a critical base on which to build. Dr. Don Berwick, recently appointed as Administrator of CMS, famously offered this advice to the British National Health Service, but it applies equally well to the U.S.:

[P]ut the patient at the center – at the absolute center of your system of care. Put the patient at the center for everything that you do. In its most helpful and authentic form, this rule is bold; it is subversive. It feels very risky to both professionals and managers, especially at first. It is not focus groups or surveys or token representation. It is the active

presence of patients, families, and communities in the design, management, assessment, and improvement of care, itself. It means customizing care literally to the level of the individual. It means asking, “How would you like this done?” It means equipping every patient for self-care as much as each wants. It means total transparency – broad daylight. It means that patients have their own medical records, and that restricted visiting hours are eliminated. It means, “Nothing about me without me.” It means that we who offer health care stop acting like hosts to patients and families, and start acting like guests in their lives. For professionals made anxious by this extreme image, let me simply remind you how you probably begin every encounter when you are following your best instincts; you ask, “How can I help you?” and then you fall silent and you listen.

In the pages that follow, we continue to chart the path for the journey Vermont is on to move to a system that provides all Vermonters and health professionals the health information they need to know, where they need it, when they need it. This work is not about connecting computers. It is about what we do with the information that connectivity and interoperability makes available. It’s an old truism that “information is power,” and in this instance, health information exchange has the power to transform.

Hunt Blair

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1. Strategic Vision for Vermont HIT

1.A. The Vermont Environment

Vermont is recognized as a national leader in the alignment and integration of Health Information Technology (HIT), Health Information Exchange (HIE), and reform of the health care delivery system. The state stands ready to expand HIT adoption and HIE connectivity statewide, building on a six year base of planning, consensus building, governance refinement, and creation and early implementation of a standards-based technical architecture.

Funding and authorization for the Vermont Information Technology Leaders, Inc. (VITL), a 501c3 not-for-profit corporation charged with developing statewide HIE, was included in the 2005 Budget Act and appropriations continued in each subsequent annual state budget. Passage of the HITECH Act and other components of the American Recovery & Reinvestment Act (ARRA) supporting investments in HIT and HIE, as well as additional federal health reforms enacted in the Affordable Care Act (ACA), position Vermont to build on its work to date and to dramatically expand the scope, scale, and speed of the state's HIT-HIE and health reform implementation.

Health information exchange and technology are a consistent focus of Vermont health policy attention, but always in the broader context of enabling transformative delivery system change. Because of that systems approach, meaningful use of HIT has been built into Vermont's vision from the outset. For instance, the Vermont HIE Network (VHIEN) operated by VITL, is a critical conduit for the Vermont Blueprint for Health IT infrastructure, enabling both personalized and population-based care coordination and management for the Blueprint's integrated primary care medical homes and community health teams.

Similarly, while this is a new edition of the state HIT plan reflecting the new federal initiatives and recent state legislation, it is the continuation of a roadmap and a vision resulting from a six year public/private collaboration. That conversation began with a 2004 HIT Summit convened by the state hospital association that led to the 2005 legislation that charged the group that became VITL with development of the *Vermont Health Information Technology Plan* (VHITP), starting an extended dialogue and consensus building process that was well underway when Vermont's landmark health reform legislation passed in 2006. The scope of the VHITP then expanded accordingly to incorporate the state's comprehensive health reform vision.

Delivered in July 2007 after a series of 31 public meetings to engage stakeholders, the original VHITP detailed the health care environment in Vermont and laid out key objectives for the use of health information technology in supporting health care reform. While much has transpired in the time since the plan was originally developed, the key foundational elements have remained remarkably stable and resilient, including five core values:

- I. Vermonters will be confident that their health care information is secure and private and accessed appropriately.
- II. Health information technology will improve the care Vermonters receive by making health information available where and when it is needed.
- III. Shared health care data that provides a direct value to the patient, provider or payer is a key component of an improved health care system. Data interoperability is vital to successful sharing of data.

- IV. Vermont's health care information technology infrastructure will be created using best practices and standards, and whenever possible and prudent, will leverage past investments and be fiscally responsible.
- V. Stakeholders in the development and implementation of the health care technology infrastructure plan will act in a collaborative, cooperative fashion to advance steady progress towards the vision for an improved health care system.

Vermont's commitment to promoting the growth of HIT and HIE meant seeking resources beyond state appropriations. Voluntary contributions from insurance carriers to an EHR pilot fund administered by VITL in 2007 validated the demand from physician practices for financial and technical assistance to implement HIT, but the pilot's scale was too limited.

Realizing the state's ambitious goals could not be achieved without more formal, systemic investment in HIT, Vermont instituted its Health IT Fund in 2008. A fee (2/10ths of 1%) paid on all health insurance claims generates annual revenues for the state Fund which then provides grants to support HIT and HIE. The Fund sunsets after seven years, meaning it will be available through 2015. The fund will be a source of matching dollars for new federal resources, enabling Vermont to maximize opportunities coming from ARRA and HITECH. (Details on the Fund, including an FAQ, are at: http://hcr.vermont.gov/improve_quality/healthcare_IT_fund.)

Given this history and preparation, Vermont was ideally positioned for the evolution in federal HIT policy contained in ARRA. In response to the passage of the federal HITECH Act, the Vermont legislature clarified the roles and responsibilities for HIT policy and HIE governance in Act 61 of 2009. Responsibility for coordination and oversight of HIT-HIE planning, which had originally been delegated to VITL, now sits with the Department of Vermont Health Access, in its Division of Health Care Reform. The Department is the state's Medicaid agency, and the Division is also responsible for the State Medicaid HIT Plan (SMHP) and administration of the Medicaid provider incentive program for meaningful use of electronic health records (EHR).

This evolution of governance reflects an understanding that emerged over time and was ratified in the 2009 legislation, with both private and public HIT stakeholders agreeing that policy guidance and coordination rests with the state, while operation of the state level HIE is best done outside state government. 18 V.S.A. chapter 219 § 9352 designates VITL, a private, non-profit corporation, as the exclusive statewide HIE for Vermont. The law also reserves the right for local community providers to exchange data.

The Governor and the General Assembly each appoint a representative to serve on the VITL Board, underscoring the close working relationship VITL has with state government. This collaborative approach ensures alignment of the organization's mission with state policy. VITL's Mission statement, updated in the summer of 2009, is "to collaborate with all stakeholders to expand the use of secure health information technology to improve the quality and efficiency of Vermont's health care system."

VITL's updated Vision is of "a transformed health care system where health information is secure and readily available when people need it, positioning Vermont as a national example of high quality, cost effective care," reflecting the state's comprehensive vision of HIT-powered health delivery system reform.

In order to fully understand the scope of Vermont's HIT-HIE vision and the state environment, it is essential to understand the larger system reform agenda. Guiding legislation calls for a highly

coordinated and integrated approach to healthcare statewide, with an emphasis on wellness, disease prevention, care coordination, and care management, with a particular focus on primary care.

Vermont's Blueprint for Health is leading this transformation through an integrated delivery model that includes patient centered medical homes supported by community health teams, and financed through a multi-insurer payment reform structure. These teams include members such as nurse coordinators, social workers, and behavioral health counselors who provide support and work closely with clinicians and patients at the local level. The teams also include a public health specialist dedicated to community assessments and implementation of targeted prevention programs.

Currently implemented in three pilot communities, the model is designed to be scalable and adaptable, from small independent practices to large hospital based practices and from rural to urban settings. The long term financial sustainability of the Blueprint model is based on reducing avoidable emergency room and acute care, reducing hospital readmissions, improving clinical transitions, and on shifting insurers' expenditures from contracted disease management companies to local community health teams. The Blueprint forms the basis of a system of integrated, coordinated care that, with passage of new 2010 reform legislation, will extend statewide by 2013.

Cost effective care depends on health information being available when and where it is needed, so Vermont's system reforms are built on the premise of ubiquitous, multi-dimensional health information exchange. In addition to encouraging EHR adoption and HIE linkages to labs and hospitals, the Blueprint has invested in the creation of a web-based registry and visit planning templates, as well as population reporting tools linked to EHR and PHR systems through the HIE.

This year, in Act 128, the Vermont legislature codified the developmental work conducted through the Blueprint's pilots, defining the components of medical homes, community health teams, and payment reform in statute. Act 128 also sets an ambitious expansion schedule for the Blueprint: by July 1, 2011, there shall be at least two medical homes in each of the state's 13 hospital service areas (HSA) and by October 1, 2013, the Blueprint shall expand statewide to primary care practices – including pediatric practices – to serve every Vermonter.

The statute also requires hospitals, which operate most of the clinical laboratory services in the state, to maintain interoperable connectivity to the HIE network as a condition in their annual budget approval process. As critical hubs of health care activity, the state's community hospitals play an essential role in supplying health information to the Blueprint practices and patients, and to the health care system as a whole. Taken together, the state's delivery system reforms and HIT-HIE policy create a supportive environment for eligible Vermont providers to meet the meaningful use requirements established by ONC and CMS.

In short, the environment for the HIT-HIE growth to be supported by ONC and CMS could not be better. Key policy decisions for advancing and expanding HIE and delivery system reform throughout the state are made. The broad brush design is complete. Funding from the State HIE Cooperative Agreement program, leveraged with the resources such as the ARRA Sec. 4201 and traditional Medicaid IT resources detailed in this plan, are enabling the state and VITL to finalize the operational design and rapidly implement statewide connectivity to the VHIE.

VITL's support of provider EHR deployment will continue creating the end user capability to contribute to and meaningfully use information available through the HIE. Funding through the

Regional HIT Extension Center (REC) Sec. 3012 Cooperative Agreement, complemented by ARRA Section 4201 funds targeting some additional supports for Medicaid providers will accelerate the deployment of EHR systems statewide.

Together, these programs will support the ongoing transformation of the health care delivery system, promote adoption for meaningful use of HIT, and expand HIE integration with state public health IT systems, public EHR portals, PHR gateways, and connectivity to the National Health Information Network (NHIN).

1.A.1 Environmental Scan Details

Make no mistake, while Vermont has an expansive vision, the actual build out of HIT-HIE is a work in progress that will take intensely focused attention and management over the coming years in order to achieve the ambitious state and federal time lines. All of the “nodes” and source points of health information require additional investment of human and capital resources. The following is a demonstration of the collaborative work VITL and the Division / Medicaid have undertaken jointly to evaluate the landscape and plan for its transformation.

Physician Practice EHR adoption rates:

The 2009 Physician Survey of primary care practices concluded 20%-25% have EHRs in various stages of implementation. Since Vermont’s single tertiary care center – Fletcher Allen Health Center – recently implemented their EPIC system across its hospital and owned primary care and specialty practice network, we anticipate that the percentage has and will increase significantly in the next several years. Additionally, most of the other hospitals are in the process of upgrading their systems and offering EHR services to their employed practices.

Survey data has not been completed on specialists, but based on anecdotal evidence it is believed that the same 20-25% range apply to them. Fletcher Allen Health Care has the largest concentration of specialists in the state. Their implementation is about 50% complete with the bulk of the remaining practices specialties.

E-prescribing Infrastructure:

Allscripts/Surescripts report that 93% of pharmacies in Vermont are accepting electronic prescribing and refill requests. The percent of independent pharmacies is lower than that for chain pharmacies. Currently, VITL is working with pharmacies as part of a HRSA funded project.

Percentage of prescriptions being submitted electronically – 12% (per Surescripts data)

The VITL ePrescribe Vermont program, a statewide initiative to help Vermont physicians and other prescribers use electronic prescribing technology, including access to a free, web-based ePrescribing application for Vermont health care providers.

VITL, through its ePrescribe Vermont program, has partnered with Allscripts and Medmetrics, the pharmacy benefit manager for the state Medicaid program. Medmetrics is building a formulary that will be loaded into the Allscripts eprescribing system as part of a federal grant which supports ePrescribe Vermont.

Labs:

The vast majority of laboratory tests are performed by Vermont hospitals and two major commercial labs. Currently, 50% of VT hospitals are delivering lab results using the HIE. HIE connectivity to LabCorp is being finalized for delivery of lab results. VITL is in the process of negotiating a contract with Quest Diagnostics.

Claims and eligibility systems:

In 2009, the legislature and the Division of Health Care Reform convened a work group to examine HIT and Payment Reform. It issued a 220 page report (available at hcr.vermont.gov on the Reports page) that provided an extensive look at the “as is” and “to be” states for both electronic eligibility checks and claims submissions and concluded that both are future priorities. The burdens of implementing ICD-10 and 5010 and other IT priorities at commercial insurers mean it will likely be several years out before evolving to the envisioned, more interactive “to be” state in which transactions would be completed in closer to real time.

Blue Cross / Blue Shield of Vermont does enable electronic eligibility checks and electronic claims submissions. Vermont Medicaid is able to provide eligibility electronically and accepts electronic claims. The Department is currently writing specifications for its new claims processing Medicaid Management Information System (MMIS) that will include the capacity to adjudicate claims electronically in close to real time for many encounters and procedures.

Hospitals:

Vermont’s hospitals are all in the process of upgrading or replacing their HIT systems. The state’s single tertiary care center began implementing a comprehensive EHR platform last year that integrates both its hospital services and its extensive network of primary care and specialist physician practices. Other hospitals have begun to implement, have selected, or are in the process of selecting new EHR systems to modernize and integrate their IT infrastructure, and while the legislature limited the growth of hospital budget expenditures for the next two years in Act 128, it specifically exempts HIT investments from those caps.

Home Health:

The statewide network of non-profit home health and hospice agencies utilize electronic reporting tools consistent with their requirements as Medicare and Medicaid providers, but those systems are currently not interoperable with other HIT systems. A strategic goal for HIE connectivity is to build out interfaces between the home health IT systems and the HIE in order to enable sharing of patient care summaries, and over time, more comprehensive data exchange.

Mental Health/Behavioral Health/Substance Abuse providers:

The state’s Community Mental Health Centers are currently upgrading patient management and reporting systems to true EHR capacity. While those systems have not traditionally focused on interoperability and there are important, continuing discussions related to protecting the privacy of exchange of MH/BH/SA diagnoses, a strategic goal for HIE connectivity is to build out interfaces between the state’s designated agency systems and the HIE in order to enable sharing of patient care summaries, and over time, more comprehensive data exchange.

In addition to the designated agencies which provide both mental health and developmental disability services, Vermont Medicaid relies on private, free-standing mental health, behavioral health, and substance abuse counselors and professionals for over 50% of its case load. While they generally do not currently utilize HIT systems, the Council representing those providers has approached the Division with an interest in establishing a common HIT infrastructure across their membership. A strategic goal for HIE connectivity is to support creation of a “thin” health record

system for these providers and to build out interfaces between that and the HIE in order to enable sharing of patient care summaries, and over time, more comprehensive data exchange.

Long Term Care:

The state's nursing homes have long reported data electronically to the state for Medicaid payment and oversight purposes, but those electronic Minimum Data Set (MDS) systems are not generally interoperable with HIT other systems. Most of the state's nursing homes have not implemented EHR systems, but most if not all of them do have electronic patient management (billing) systems. A strategic goal for HIE connectivity is to build out interfaces between the nursing home IT systems and the HIE in order to enable sharing of patient care summaries, and over time, more comprehensive data exchange.

In addition, much of the state's long term care is provided in home and community based settings: in private homes, in residential care homes, and in assisted living, congregate, elder, and low income housing facilities. The home health connectivity will be an important method for linking long term care in those settings to the HIE network, but Vermont's strategic vision also includes extending HIT to home and community based settings, including the implementation of telemedicine telemetry reporting technologies and the extension of the Blueprint IT infrastructure to the full continuum of health care sites, services, and providers.

Public Health:

Vermont has a single, state health department. It is currently receiving some immunization records, syndromic surveillance, and notifiable lab results electronically, but as indicated in the Operations section of the Plan, the integration of public health data collection with the HIE is a major component of the state / HIE infrastructure build out. A recently negotiated contract between the Vermont Health Department and VITL establishes the HIE as the transport mechanism for data exchange with the state Immunization Registry, and other public health registries will be added over time. Similarly, syndromic surveillance and notifiable lab result submissions will migrate to the HIE as the state IT systems capacity is modernized to enable connectivity to the HIE network.

1.A.2. Meaningful Use

Vermont has been honing its strategy for supporting eligible providers and hospitals to meet meaningful use requirements since the phrase officially entered the lexicon in 2009. As noted above, the entire health care delivery system transformation architecture – the Blueprint and the HIT-HIE operational plan – is designed to meet the same goals envisioned by the federal architects of meaningful use, including the capacity to improve the quality, safety, and value of care through the ubiquitous use of health information for decision support, quality improvement initiatives, and patient empowerment.

VITL initiated the ePrescribe Vermont program in 2008, supported by a HRSA grant. The program provides a statewide license for prescribers without EHR's to use a leading free-standing e-prescribing application, provides incentives to providers with EHR's to implement e-prescribing and provides support to independent pharmacies in the state to accept and transmit electronic prescriptions. This program will enable eligible providers to meet Stage 1 meaningful use requirements in 2011.

Vermont is somewhat unusual in that most of the state's clinical laboratory work is performed by the state's hospitals, not by commercial labs. As noted above, all hospitals will be connected to

the HIE no later than July 1, 2011 to provide, at a minimum, lab results and patient care summaries. Accordingly, both those HIE functions will enable eligible providers to meet Stage 1 meaningful use requirements in 2011.

The integration of public health reporting systems with the HIE network to support later stage meaningful use requirements was described above and is detailed in the operational section of the VHITP. In addition, the Blueprint IT infrastructure and its system of common, structured clinical data elements provides the foundation for clinical quality reporting measures in later stages of meaningful use.

By October 2013, every Vermont primary care practice that wants to be part of the Blueprint medical home and community health team network – which will very likely be a substantial majority of all primary care sites – will have access to the Blueprint clinical data repository, registry, and reporting tools. The Blueprint Registry’s clinical data set is able to provide information on both preventive services and chronic conditions. Nurses on the community health team will be able to do outreach to reduce gaps in preventive services as well as to arrange appointments and outreach for specialty services for diabetics requiring specialized services.

1.B HIE Development and Adoption

Through the state’s extensive health reform initiatives, Vermont’s health care providers have been engaged in an extended dialogue with peers, policy makers, and state government leadership that has set the stage for the next phase of HIE development. To date, VITL has built the core HIE infrastructure (see 3.C.2.) and linked 8 of the state’s 14 hospitals. The implementation of interfaces has been phased, based on resource limitations. Because of the need to have EHR systems to connect to the HIE, VITL also focused resources on initial pilots, and then on a more comprehensive EHR adoption initiative.

In anticipation of ARRA resources, VITL has developed a plan to complete bi-directional interfaces to each of Vermont’s 13 community hospitals and single tertiary care center, as well as to a neighboring New Hampshire tertiary care medical center, in 2011. This core infrastructure capacity will create HIE connectivity within each Hospital Service Area (HSA). It is within those local communities that the vast majority of meaningful health information will be exchanged. Because of Vermont’s rural nature, medical services are generally concentrated in Hospital Service Areas served by a single hospital, with relatively limited competition across and between the HSAs.

The roll out of the Blueprint for Health is also organized by HSA, providing further alignment with HIT-HIE expansion. As noted in the previous section, the Blueprint is the “umbrella” under which delivery system transformation is organized, and its partnership and integration with the HIE expansion provides strategic leverage and drives demand. The Blueprint and its expansion and state HIT-HIE coordination are both functions of the Division of Health Care Reform, so the integration of these efforts is managed by a single leadership team, to ensure that all of the inter-dependent milestones and implementation goals are fully integrated.

Currently, three Vermont HSAs have active Blueprint integrated pilots (with operating primary care medical homes served by community health teams receiving enhanced funding through multi-insurer payment reform). Three more HSAs have Blueprint grants and are preparing to implement the integrated medical home/community health team model. In May 2009, the state hospital leadership agreed to support expanding the Blueprint to all the remaining HSAs, and the

legislature appropriated special funding in 2009 for Blueprint “readiness” in those communities. As noted above, in 2010, legislation expands the Blueprint, shifting it from pilot to program mode, building on the cumulative work to date. State Health Care Reform, Blueprint, and VITL leadership are meeting together with leaders in each of the state HSAs to design integrated Blueprint-HIE expansion planning at the local level.

Providers in the Blueprint integrated pilot communities are already starting to demonstrate meaningful use of HIT, thanks to the linking of EHRs and the Blueprint registry and population management tool through HIE. Since the entire premise of the Blueprint is based on improving care coordination and improving the quality and efficiency of care, aligning HIE development and adoption with Blueprint expansion provides powerful incentives for providers throughout a community to engage in HIT adoption and HIE connectivity.

Indeed, Vermont’s strategic vision for HIT and HIE is to implement a unified, operational framework for integration of the full continuum of the health care system, including mental health and substance abuse services, long term care, and home health, as well as public health and social and human service agencies. The following table illustrates the breadth and depth of the vision.

17	VT Hospitals	1 Tertiary Academic Medical Center, 8 CAH, 5 Community Hospitals, 1 VA Medical Center, 1 Private Psychiatric Hospital & the State Hospital
	Plus Regional Hospitals	adjacent NH, MA, NY Tertiary Hospitals, and access beyond via New England Telehealth Consortium
14	Blueprint for Health Regions	with at least one Community Health Team per region
8	FQHC Grantees	operating a total of 40 primary care, dental, and mental health service sites
14	Rural Health Clinics	11 Family Practice and 3 Pediatric
240	Primary Care Practices	other GP, FP, OB/GYN and internal medicine practices
3,498	Physicians	with active Vermont licensure
503	Dentists	with active Vermont licensure
14	Home Health & Hospice Agencies	across Vermont; all non-profit community based, all with integrated Hospice.
16	Community Mental Health Centers	and Developmental Disabilities Agencies operating over 50 sites
2,412	MH/BH/SA Counselors and Residential SA Treatment Centers	licensed private mental health/behavioral health/substance abuse counselors; clinical social workers, psychologists and other professionals
250+	Long Term Care and Public Housing sites	including Nursing Homes, Residential Care Homes and Assisted Living Facilities, Adult Day, Meals on Wheels, and Congregate Living sites.
9	Dept. of Corrections sites	to be linked via a common EHR and MHISSION-VT infrastructure
12	District Health Dept. and Agency of Human Services Offices	including participation of local Public Health staff, social & human services staff, as well as Agency and Department Central Offices
621,270	Vermont citizens	connecting to patient portals, PHRs, and Health 2.0 applications

While the scope of this vision exceeds the near-term funding for HIE from ONC, the state is seeking resources to support and enable ubiquitous HIT adoption and HIE connectivity from multiple sources, including the state's HIT Fund, which may help leverage funding from CMS under ARRA Sec. 4201 and CMS MMIS funding authority.

Rapid scale-up of Vermont's current pilots and initiatives will create a statewide demonstration platform for a fully integrated health care delivery system operating in a multi-payer environment with a full market mix of provider organization types. In short, Vermont's strategic vision is to become a "Beacon state" demonstrating the opportunities for delivery system transformation through robust deployment and implementation of HIT across the full spectrum of the continuum of health care.

Key State Goals for HIE Development and Adoption

- I. Encourage and enable the deployment of electronic health record systems within the state to increase the amount of available electronic health information. Provide the necessary support to enable proper use of this technology within practice settings.**

Rationale: Automated health information exchange cannot take place efficiently without widespread deployment of electronic health record systems,. But technology alone is not sufficient: clinical practice must be adjusted to ensure meaningful use of information technology.

Current state: Substantial investments have been made in EHR deployment by hospitals and physician organizations: an estimated twenty to twenty-five percent of physicians have selected, begun to implement or deployed EHR systems to date.

Plan:

- Support the creation of menus of tools and supports to broaden the support of EHR deployment to physician primary care and specialty practices.
- Coordinate funding to provide education and supports to help providers achieve meaningful use of their EHR systems.
- Encourage collaborations among entities deploying EHRs to accelerate deployment and support progress towards meaningful use.
- Encourage collaboration between the provider and higher education communities to support EHR adoption and meaningful use.

VITL has been selected as the state's Regional HIT Extension Center (REC) and has a separate, detailed ONC plan for REC activities.

II. Establish and operate the infrastructure necessary to provide secure statewide electronic health information exchange to achieve the plan's vision.

Rationale: A modern, secure information network can connect various health care providers and enable the flow of information among multiple organizations. EHR and ancillary systems shall comply with standards that promote their ability to exchange data with other systems through this infrastructure.

Current state: The basic infrastructure for electronic HIE is in place and clinical information is being transmitted between providers and to the Blueprint for Health data system. Policies governing privacy and security of information exchange on the state HIE have been developed and approved. Procedures to connect hospitals and clinicians to the HIE are not as streamlined and understandable as they need to be.

Plan:

- Refine business agreements to improve the ease of connecting to the HIE.
- Connect all acute care hospitals in the state to the HIE.
- Ensure that all EHR systems that are implemented are able to connect to the HIE using standard formats
- Provide all Blueprint data to the Blueprint Registry via the HIE
- Seek funding to support full EHR adoption and HIE connectivity for mental health, behavioral health, long term care, home health, and other individual providers, organizations, and institutions.

III. Enable consumers to take an active role in their health care by providing access to their electronic health information.

Rationale: Access to personal health information supports consumers' efforts to take more control over their own health by being better informed about steps that have been taken and steps that can be taken to improve their health. Consumers also have the right to view their records and ensure that they are used appropriately.

Current state: Stakeholder involvement, including consumers, was instrumental in crafting privacy and security policies. Consumer communication limited to date. No

consumer access via the HIE though consumer access to several EHR systems' patient portals.

Plan:

- Collaborate with VITL and HIT stakeholders to build an explicit consumer communication and support plan, focused on privacy and security and the rationale to "opt in" to HIE
- Encourage the development of patient portals and interoperable connectivity to Personal Health Records
- Medicaid and VITL explore the potential implementation of a publicly supported PHR available to all Vermonters.

IV. Enable the Vermont Department of Health and other public health agencies to leverage HIT/HIE investments to monitor and ensure the public's health more transparently and quickly.

Rationale: Public health agencies have a legal obligation to not only monitor the public's health but to respond to emergencies when they occur.

Current state: VITL is currently working with the Vermont Department of Health on the specifications to provide immunization records to the Department from provider practices. Subsequent phases will provide the immunization information back to the providers and expand the use of the HIE for reporting.

Plan:

- Provide bi-directional flow of data from providers to public health registries via the HIE
- Upgrade and modernize state IT systems to provide interoperable communication across state health and human service programs and providers.

1.C HIT Adoption

Rationale: From the outset, EHR adoption has been a critical factor in efforts to expand the use and value of the HIE., It is not possible to fully leverage health information exchange and clinical collaboration without an EHR.

Current state: The Vermont Health IT Fund and the preceding voluntary contributions to VITL supported EHR deployments beginning in 2007. Several Vermont hospitals have used new provisions in federal laws and regulations to help fund EHRs for physician practices in their service areas.

VITL has been selected as the Regional Extension Center for Vermont and is scaling up its capabilities to support 1100 providers to achieve meaningful use in the next two years. Over two hundred providers have signed up for services in the initial weeks of the program.

Plan: Successful, rapid deployment of EHR's in each Hospital Service Area will be based on collaborative planning among the Blueprint, the hospital, VITL and other resources in the state. Components of deployment will include:

- Practice Support for readiness, selection and change management

- Deployment Services – Establish relationships with entities in the state who are also working on EHR deployment to support implementation and optimization
- EHR Vendor Alignment
- Hardware Network support – Identify resources capable of assessing, deploying and managing secure, cost-effective networks and hardware in small physician offices
- Financing – Develop public and private loan and lease programs in conjunction to assist providers in managing the financial impact of the deployment.

1.D Medicaid Coordination

Coordination with the state Medicaid program is embedded in the structure of Vermont's approach to HIT-HIE and health care reform. Vermont's state Medicaid agency is the Department of Vermont Health Access (DVHA), which includes the Division of Health Care Reform (HCR) and is designated by the Governor as the state lead for HIT. The Division's Director is also the State HIT Coordinator. The ONC HIE Cooperative Agreement is administered in the state Medicaid program business office. This structure will ensure complete alignment and integration of the state HIT plan with the state's Medicaid HIT plan and HIE development efforts, as well as comprehensive "single site" reporting of all ARRA-related HIT-HIE expenditures and assurance of compliance with appropriate separation and allocations of funds.

The Division of Health Care Reform leads the DVHA efforts to ensure broad participation in ARRA Medicaid HIT incentives for eligible providers, and will administer the program to support those Medicaid providers' EHR adoption, practice transformation, and implementation in conjunction with VITL and the Regional HIT Extension Center Program. As noted elsewhere, state law enables VITL to act as Medicaid's contractor to certify Meaningful Use. DVHA has full responsibility to plan for and administer Medicaid incentive payments to qualifying providers, ensure their proper payments, auditing and monitoring of such payments, and ensuring Medicaid participation in statewide efforts to promote interoperability and meaningful use of electronic health records and will do so in coordination and collaboration with VITL.

Vermont's State Medicaid HIT Plan (SMHP), currently in development, will not just be a "road map" for implementing the Medicaid provider incentive program, it will be a three dimensional topographic map of the health care *and* Medicaid funded mental health, home health, long term care, and other human services delivery system infrastructure in its "as is" and "to be" states. As indicated throughout this Plan, Vermont's strategic goals for HIT-HIE implementation and health delivery system reform are transformational. That vision is not limited just to providers and hospitals eligible for Medicaid incentive payments, it extends to all Medicaid providers in Vermont, which essentially means all Vermont providers, given the high enrollment of providers in the Medicaid program.

It is part of that vision to ensure that all elements of the state's Medicaid programs, as well as other programs across the Agency of Human Services (such as WIC and Maternal and Child Health Bureau program, Food Stamps and heating assistance) and the clients they serve, are included in the communication framework enabled by the HIE network.

The Blueprint data repository is utilized by the multi-disciplinary community health teams that focus on the general population across medical homes; that IT infrastructure is being extended to support Medicaid's community-based care coordination personnel as they integrate more

thoroughly into the Blueprint as it expands, and the state is considering whether to extend the platform further to support case management and care coordination of sub-populations served by AHS programs. The Blueprint registry or, depending on the specification and procurement process, something similar that links to it through the HIE will be used for consolidation of reporting across programs and departments, gathering feeds directly from service and provider settings and systems via the HIE.

1.D.1 Required and Encouraged Medicaid / HIE Coordination

The ONC-HIE-PIN-001 lists seventeen activities that this plan should consider: the first five are mandatory, the others are encouraged. They are also key elements of the SMHP. Because of the integrated nature of state HIE oversight and policy development within the state Medicaid agency, coordination of many of these activities is “baked in” to the structure of the Division of Health Care Reform’s approach to HIT-HIE.

1. The state’s governance structure shall provide representation of the state Medicaid program.

Medicaid is at the center of the state’s HIT policy governance structure. The State HIT Coordinator is a Director of Medicaid’s Division of Health Care Reform, which is the both the recipient of Section 3013 ONC funding and Section 4201 provider incentive program funding.

2. The [ONC Sec. 3013] grantee shall coordinate provider outreach with the state Medicaid program.

Medicaid and the Division of Health Care Reform have grants and contracts with VITL, which serves as both the State Designated Agency for HIE and the ONC funded REC. All provider outreach is integrated across the domains of the Blueprint, promotion of EHR adoption, implementation and upgrades for meaningful use, connectivity to the HIE, and participation in the Medical Home program. The Division plans to have a Medicaid specific Provider Relations specialist hired to support VITL and providers with technical assistance related to the incentive program as part of the HIT Implementation Planning Advanced Planning Document (HIT – IAPD).

3. The grantee and the state Medicaid program shall identify common business or health care outcome priorities.

Because the grantee is the state Medicaid program, which operates the Division of Health Care reform to implement business and health outcome priorities shared by Medicaid and the other payers participating in the Blueprint for Health multi-insurer reforms, priorities are aligned across domains of state government, private insurance, and the provider community around implementation of a robust, integrated HIT-HIE infrastructure.

4. The grantee, in collaboration with the Medicaid program, shall leverage, participate in and support all Beacon Communities, Regional Extension Centers, and ONC funded workforce for meaningful use.

The Commissioner of the Department of Vermont Health Access, head of the state Medicaid program, and the Division of Health Care Reform Director & State HIT

Coordinator have provided joint letters of support for Beacon applications, the REC, and ONC funded workforce applications. Both are fully committed to ensuring collaboration across the domains of health reform and HIT statewide.

5. The grantee shall align efforts with the state Medicaid agency to meet Medicaid requirements for meaningful use.

The grantee is the state Medicaid agency and is also responsible for meeting Medicaid requirements for meaningful use.

6. Obtain a letter of support from the state Medicaid Director.

Included in Appendix D.

7. Conduct joint needs assessments.
8. Conduct joint environmental scans.

The Division of Health Care Reform / Medicaid and VITL conduct needs assessments and environmental scans jointly and Medicaid maintains a statewide Master Provider Index.

9. Collaborate with the Medicaid program and the ONC-supported REC to provide technical assistance outside of the REC's federally funded scope of work.

See 2. above.

10. Leverage public help desk/call center contracts and services between the State HIE Program, Medicaid, and the REC.

Examination of this option is included in our SMHP opportunities list.

11. Conduct joint assessment and alignment of privacy policies at the statewide level and in the Medicaid program.

The Division of Health Care Reform will add a privacy policy specialist to the staff as part of its HIT IAPD request for funding authorization to represent Medicaid and the state in the on-going alignment of privacy policies and their impact on Medicaid. With the State HIT Coordinator, they will also participate in the VITL Privacy & Security Work Group.

12. Leverage existing Medicaid IT infrastructure when developing the HIE technical architecture.

As described in Section 2 below, the HIE technical architecture is actually helping to leverage developments in the Medicaid IT infrastructure, providing unprecedented opportunities for better integration of Medicaid, public health, and HIE.

13. Determine whether to integrate systems to accomplish objectives such as making Medicaid claims and encounters available to the HIE and information from non-Medicaid providers available to the Medicaid program.

This is actively being examined in building the specifications and requirements for the new MMIS system and its integration with the HIE.

14. Determine which specific shared services and technical services will be offered or used by Medicaid.

Because of the high percentage of Vermont health care providers who are enrolled as Medicaid providers, Medicaid is taking the lead for development and maintenance of a shared Master Provider Index service that will support the state, the HIE, and the state's multi-insurer claims database. Other opportunities for integration between the HIE and Medicaid are under active exploration and will be further articulated in the SMHP.

15. Determine which operational responsibilities the Medicaid program will have, if any.

Medicaid will administer the Provider Incentive program directly, and through its Division of Health Care Reform, has operational responsibility for the integrated project management of HIT, HIE, EHR adoption, implementation, and upgrade, achievement of Meaningful Use criteria, Blueprint medical home, community health team, and payment reform program domains.

16. Use Medicaid HIT incentives to encourage provider participation in the HIE.

During the 2010 legislative session, the legislature considered and rejected a proposal to tie meaningful use incentives to provider participation in the HIE. However, Act 128 of 2010 does require hospital connectivity to the HIE as a condition of the hospital budget approval process.

17. Collaborate during the creation of payment incentives, including Pay for Performance under Medicaid, to encourage participation by additional provider types.

Medicaid is a full participant in the provider incentive payment structure of the Blueprint Medical home and is exploring ways, through the Division's Director of Payment Reform, in which Medicaid, the HIE, and Blueprint can be leveraged as a part of more systemic payment reform that reaches the full provider continuum.

1.E Coordination with Medicare and Federally Funded/State Based Programs

Responsibility for coordination of all HIT-HIE activities, initiatives, and programs both within and across state government agencies and their federal partners, as well as with external stakeholders and their interaction with state and federal programs, rests with the DVHA Division of Health Care Reform.

Vermont sees substantial opportunities for dynamic systems integration, particularly because of the timing of the ARRA funding opportunities and the re-procurement of the state's Medicaid Management Information System (MMIS). Like many states, Vermont's disparate state and state/federal programs operate on a diverse set of legacy systems. Through the state's recently completed Medicaid Information Technology Architecture (MITA) assessment and planning process, Vermont has identified opportunities for conversion and upgrade to a Service Oriented Architecture (SOA) for an evolving Agency of Human Service (AHS) IT enterprise

infrastructure. The state has identified three tiers of projects that represent targets of opportunity. (These are detailed in Appendix C.)

The following programs highlighted in the ONC guidance are addressed specifically below.

1.E.1. Medicare

The Division of Health Care Reform, its HIT Stakeholders Group, and VITL are coordinating communication and outreach to the provider community – with the collaboration of both the Vermont Medical Society and Vermont Association of Hospitals and Health Systems – to ensure Vermont practitioners are fully aware of the incentive payments for meaningful use of HIT for Medicare participating providers. Communication will include weighing the respective benefits of choosing Medicare and Medicaid incentives, for physicians who must choose one or the other, as well as technical assistance for hospitals. In addition, the Division of Health Care Reform has responsibility for development of the SMHP, which requires Medicaid/Medicare HIT planning and program coordination.

1.E.2. Centers for Disease Control

As noted above, integration of the HIE with public health is a core goal of Vermont HIE policy. The Vermont Department of Health (VDH), as the statewide recipient of CDC funding, oversees several immunization programs as well as health surveillance for the State of Vermont. Within the Health Surveillance program activities include the monitoring, surveillance and control of chronic diseases and disabling conditions. The Office of Public Health Preparedness within the Department of Health works with hospitals, healthcare providers, and others to respond to an array of public health emergencies including pandemics. The state is actively pursuing opportunities to integrate these programs IT systems with the larger AHS enterprise upgrades and connectivity to the HIE.

Consistent with the HHS and CDC vision for state level reporting flowing up through the PHIN and NHIN, full connectivity of VDH programs to the VHIEN is a core component of the state vision for HIE connectivity. As a first step, VITL and VDH are currently testing submissions to the state Immunization Registry through the VHIEN and will expand first to bi-directional immunization reporting and reading, then to the other registries maintained by VDH.

VDH and VITL are working with the state’s hospitals on a hospital-acquired infection reporting initiative for the CDC leveraging the VHIEN.

1.E.3. Long Term Care

Under Vermont’s Medicaid waiver the Department of Disabilities, Aging, and Independent Living (DAIL) oversees a program entitled Choices for Care that offers several choices for beneficiaries for long term care services. Built on a philosophy of “aging in place” through the aggressive utilization of Home and Community Based Services (HCBS), Choices for Care allows qualifying individuals to seek alternatives to nursing home care. This has multiple implications for HIT-HIE planning and implementation.

First, consistent with the state’s overall vision embodied in Choices for Care, integration of electronic demographic and clinical communication across and between long term care

providers and entities, as well as connectivity to hospitals and physicians, is essential. Because of this, as noted above, Vermont's vision is to utilize the VHIE to connect home health agencies, area agencies on aging, adult day care centers, independent living centers, public and low income housing serving elders and disabled adults, and individuals homes through telemedicine and web-based health information tools. Connectivity for nursing homes, residential care homes, and assisted living facilities is also a key element of the vision for the long term care in the HIT-HIE architecture.

One complication is that the legacy IT systems in long term care organizations and other entities serving the elder and disabled populations are even more disparate than the systems used in physician and hospital settings, making interoperability an even more substantial challenge. Nonetheless, rudimentary secure clinical messaging is a first achievable step, and through the efforts of ASPE, ONC, and other branches of HHS, standards for compatibility and data transfer will continue to be refined.

The guiding vision in Vermont is that long term care services and beneficiaries are integral components of the HIE community, are included in the core infrastructure vision from the outset, and the state will build on that as aggressively as funding allows.

1.E.4. HHS/ASPE

Consistent with the work of the Office of the Assistant Secretary for Planning and Evaluation on harmonizing reporting from the OASIS system for home health agencies and MDS system for nursing homes and skilled nursing facilities, the Division of Health Care Reform and VITL will work with Vermont nursing homes and home health agencies to explore opportunities for utilizing their existing data systems to build bridges to HIE. Vermont will seek opportunities to expand this work through data simplification initiatives coming from ASPE and look to ONC for guidance on opportunities to engage in those initiatives.

1.E.5. HIV Care Grant Program

The Vermont Department of Health is the primary statewide recipient of HIV/AIDS funding. The state does not receive HIT-specific HIV/AIDS funding, but consistent with the approach discussed above and the ASPE vision of coordination across HHS programs, the Division of Health Care Reform and AHS IT staff will work with the VDH to seek opportunities for systems integration and build them into the implementation plan.

1.E.6. Health Resources & Services Administration (HRSA) Maternal and Child Health Bureau (MCHB)

The Vermont Department of Health is the primary statewide recipient of Maternal and Child Health Bureau (MCHB) funding and also works closely with the Vermont Department of Children and Families (DCF) on programs serving these populations. The state does not currently receive MCHB Systems Development Initiative program funding. However, the VDH is also the primary statewide recipient of the Supplemental Nutrition Program for Women, Infants, and Children (WIC). The WIC program is closely integrated with the VDH MCHB and DCF programs and an initiative to upgrade the legacy WIC case management system and integrate it with the AHS enterprise architecture and its connection to the VHIE is included in the state vision for HIE. In addition, the Blueprint for Health is currently expanding its scope to include pediatric

populations with development of pediatric-focused care management and best-practices guidelines embedded in Blueprint Registry architecture.

The project would link to early intervention services as part of the currently implemented Bright Futures Information System (BFIS) or develop a system that can link with BFIS to support the business processes for Children's Integrated Services (CIS), which manages services for pregnant women and children birth to five and includes programs previously referred to as Family Infant Toddler Program (FITP; IDEA Part C), Healthy Babies, Kids and Families (HBKF), and Children's Upstream Services (CUPS). The project would support preparation of the Federal reporting requirements for FITP (VT's IDEA Part C Program) and the state reporting requirements for all three programs.

Vermont will seek opportunities to expand this work through initiatives coming from HRSA/MCHB and look to ONC for guidance on opportunities to engage in those initiatives.

1.E.7. HRSA Office of Rural Health Policy (ORHP), Bureau of Primary Health Care (BPHC), & Bureau of Health Professions (BHP)

The Vermont Department of Health operates an integrated Office of Rural Health and Primary Care. The Office has supported and encouraged HIT development in Vermont, working with HRSA grantees on numerous projects implemented to support local implementation of state health reform initiatives at Federally Qualified Health Centers (FQHC), Rural Health Clinics (RHC), and Critical Access Hospitals (CAH). The Office funded the first statewide survey of EMR adoption in primary care practices and worked closely on development of two HRSA/ORHP funded rural health networks, one focused on building a statewide telemedicine infrastructure, the other supporting FQHC, RHC, and CAH integration with the Vermont Blueprint for Health and HIT-HIE initiatives.

The state Office of Rural Health and Primary Care, along with the state Primary Care Association, provide an important link to the state's HRSA funded Federally Qualified Health Centers (FQHC) as well. While most Vermont FQHC's have implemented EHR systems, several have not. The Division of Health Care Reform will work with the state's FQHC's to ensure collaboration and coordination with HRSA HIT funding programs targeted to FQHC's and integration with the state HIE vision.

A HRSA Health Center Controlled Network (HCCN) award to the Vermont Rural Health Alliance of FQHCs, CAHs and other safety net providers will also contribute to the integration of those providers in the state HIT-HIE, REC, and Blueprint initiatives.

1.E.8. Substance Abuse and Mental Health Services Administration (SAMHSA)

The Vermont Department of Mental Health (DMH) and Vermont Department of Health (VDH) are the statewide recipients of most SAMHSA funding. Like long term care services, the vision is for expansive integration of mental health, behavioral health, and substance abuse service providers and their clients in HIE. This includes connectivity between the state hospital and community mental health centers, along with many other agencies. (See VA collaboration at 1.E.11. below.) There are special challenges, including the lack of interoperability standards and privacy laws specific to MH and SA clients and services. The Division of Health Care Reform will continue to work closely with DMH, VDH, and community partners, providers, and advocacy organizations to realize a vision of secure, appropriate transmission of health information.

1.E.9. Medicaid/CHIP

The integration of Medicaid/CHIP programs in the HIE vision and planning is articulated elsewhere in the Plan and will be detailed in the State Medicaid HIT Plan (SMHP). In summary, because of the co-location of state HIT-HIE oversight and coordination functions within the state Medicaid agency, Vermont will seek every opportunity to build interoperable connectivity for Medicaid providers and beneficiaries into the HIE infrastructure.

In addition, Vermont received a five year CHIPRA quality improvement grant with the State of Maine in early 2010 that focuses on expansion of the Blueprint model in pediatric and family medicine practices across the state, integrating the Bright Futures templates into the Blueprint Registry and to implement other pediatric specific HIT resources and clinical decision support.

1.E.10. Indian Health Service

There are no recognized tribes or Indian Health Service programs in Vermont.

1.E.11. Veteran's Administration

The State is coordinating with the VA on multiple fronts. Coordinated HIE planning is occurring between the Department of Mental Health (DMH) and the VA at both the White River Junction veterans' hospital and at the VA Community Based Outreach Centers (CBOC), particularly in Chittenden County. Multi-entity coordination is under way among DMH, the VA, Dartmouth Hitchcock Medical Center and its Vermont-based practices, Fletcher Allen Health Care, the Vermont State Hospital, the University of Vermont, the Vermont Office of Veterans Affairs, and the Vermont Department of Corrections for HIE through the DMH Futures program, various State-sponsored Continuity of Care initiatives, and the SAMHSA funded MHISSION-VT program, an HIE-enabled jail diversion program for veterans with mental health and substance abuse issues.

It should also be noted that the Vermont Blueprint for Health Community Health Teams described in earlier sections, include many organizations and community agencies touched by the federal programs listed above. They are connected by the DocSite care management and care coordination tools to HIE as the Blueprint expands statewide. A pilot program is in development currently to utilize DocSite as the clinical care coordination tool in public and low income housing, to test its usability for housing agencies seeking closer collaboration with health care providers for the benefit of their residents. Again, the vision is clear: comprehensive, interoperable connectivity built on the HIE backbone but extending well beyond the physician and hospital communities.

1.F Coordination with Other ARRA Programs

1.F.1. Regional Extension Center

ONC awarded VITL a Sec.3012 Cooperative Agreement to offer core and direct assistance services to 1100 priority primary care providers (PPCPs) in Vermont. As appropriate, VITL will expand its offerings to non-priority care providers and specialists. The services offered include:

- Education and Outreach
- National Learning Consortium

- Vendor Selection and Group Purchasing
- Implementation and Project Management
- Privacy and Security Policy
- Practice and Workflow Redesign
- Progress towards Meaningful Use
- Functional Interoperability and Health Information Exchange
- Local Workforce Support

Since VITL oversees the HIE as well as providing REC services, it will be possible to provide an integrated service plan to each practice based on their needs. The approach will be to do a single needs assessment of the practice as part of its REC intake and establish a primary contact point and single project plan to cover REC, HIE and Blueprint preparatory services. In this way, the practices will have a coordinated implementation experience despite multiple support programs.

1.F.2. Additional Direct Assistance to Critical Access and Rural Hospitals

VITL has applied for a REC Supplement to provide additional resources to eight Critical Access Hospitals (CAHs) and Brattleboro Memorial Hospital (a rural hospital in Southeastern Vermont). Additional services for providers associated with community-based hospitals include:

- Work with hospital CIO's and associated primary care providers to determine the additional assistance needed beyond the capacity of the hospital's IT resources.
- If the provider plans to use the hospital EHR:
 - Work with the hospital to determine the functionality of their EHR to meet meaningful use and document the gap.
 - Develop a plan to overcome the gap and recommend alternative ways for the provider to access the functionality required to meet meaningful use.
- If the provider plans to use their own EHR:
 - Work with the provider to determine his/her needs for connecting to the statewide HIE, the hospital EHR or third party offerings.
 - Work with the provider, EHR vendor, hospital and/or state HIE to develop a plan to build the appropriate HIE interfaces.
 - Work with the providers and hospitals to develop a plan for all organizations to achieve meaningful use.

The work schedule for the CAH/RU providers to achieve meaningful use by 2012 is included in our ONC approved REC Operations Plan as part of the "baseline" numbers.

1.F.3 Workforce Development

In 2009, the legislature passed Act 61 that required the administration to convene a group of stakeholders representing Vermont institutions of higher education to look at work force issues related to the anticipated rapid expansion of the use of Health Information Technology. The legislation required the state "to evaluate federal grant opportunities available to establish or expand medical health informatics education programs for health care and information technology students to ensure the rapid and effective utilization of health information technologies."

The Division of Health Care Reform established a work group that met through the summer and fall of 2009. It included representatives from the University of Vermont, the Community College of Vermont, the Vermont state colleges, Marlborough College, Champlain College, Vermont HITEC/Fletcher Allen Workforce Institute, the Vermont Department of Labor, MBA Healthgroup, Vermont Information Technology Leaders, Inc. (VITL), the Division of Health Care Reform, and the Health Care Reform Commission. The group agreed that the state's training capacity would need to be fully utilized to meet HIT work force needs, that various institutions and programs each have contributing roles to play, and that Vermont applications will be strengthened by the kind of collaboration evidenced by the work group.

1.F.4 ARRA Workforce Funding Opportunities

Community College of Vermont (CCV) participated in the FOA led by Tidewater Community college (VA) for Region E, which includes New England and Mid-Atlantic states. The Vermont workgroup produced a report providing extensive documentation of approaches to HIT work force job titles, roles, and responsibilities, training requirements for HIT work force, career options and pathways, Vermont's current higher education and training options capacity, the state's HIT Education and Training programs, and Certifications for HIT Positions.

Below is a list of job titles representing the HIT workforce required for the deployment, implementation and on-going support of the EHR at hospital, ambulatory or clinic sites:

- Project Executive Sponsor, Physician Sponsor, Vendor Sponsor
- Physician Champion, Clinical Champion
- Project Manager
- Client Site Manager
- Clinical Transformation Coordinator/Analyst
- Clinical Liaison
- Business Transformation Coordinator/Analyst
- Business Liaison
- Technical Coordinator/Analyst
- Technical Liaison
- Network Coordinator/Analyst
- Reporting Coordinator/Analyst
- Application Coordinator/Analyst
- System Integration/Architect/Tester
- Interface Coordinator/Analyst
- Medical Records Abstractors/Scanners
- Training Coordinator
- Trainers
- Testing Coordinator
- Testers
- Go-Live Support Resources
- Functional/Technical (Super-User and End-User Support)
- Post Go-Live Help Desk Support — Tier 1,2,3
- Implementation Consultant
- Systems Administrator

1.F.4.a. Community College Consortia

In the spring of 2010, ONC awarded Tidewater Community College one of five grants to provide assistance to institutions of higher education to establish or expand health information technology education. As part of the consortium led by Tidewater, CCV will offer six-month academic programs through traditional on-campus instruction and distance learning modalities.

The programs will provide each trainee with skills and competencies that he/she does not already possess. Training for all Consortium member colleges will begin in September 2010. The Consortia plans to train 10,500 students annually. CCV is committed to train 225 workers in the next two years.

CCV will train students to fulfill mobile adoption support positions and permanent health care delivery staff.

1.F.4.b. Mobile Adoption Support Positions

Mobile workers will support implementation at specific locations for a period of time, and then move on to new locations. Potential employers for these include regional extension centers, providers, vendors, and state/city public health agencies. Roles include:

- Practice workflow and information management redesign specialists:
Workers in this role will assist in reorganizing the work of a provider to achieve of meaningful use of health IT to improve health and care. Individuals in this role may have backgrounds in health care (for example, as a practice administrator) or in information technology but are usually not licensed clinical professionals.

Responsibilities include:

- Conducting user requirements analysis to facilitate workflow design
- Integrating information technology functions into workflow
- Documenting health information exchange needs
- Designing processes and information flows that accommodate quality improvement and reporting
- Working with provider personnel to implement revised workflows
- Evaluating process workflows to validate or improve practice's systems

- Implementation support specialists:

Workers in this role provide on-site user support before and during implementation of health IT systems in clinical and public health settings. Typically, workers will have experience in information technology or information management. Responsibilities include:

- Executing implementation project plans, by installing hardware (as needed) and configuring software to meet practice needs
- Incorporating usability principles into design and implementation
- Testing the software against performance specifications
- Interacting with the vendors as needed to rectify problems that occur during the deployment process

1.F.4.c. Permanent Staff of Health Care Delivery and Public Health Sites

Maximizing the meaningful use of HIT by health care providers and public health agencies will require ongoing support. Preparation for this set of roles will typically require six months of intense training for individuals with appropriate backgrounds.

- Technical/software support staff:

Technical/Software support staff maintains systems in clinical and public health settings, including patching and upgrading of software. Their background should include information technology or information management. Workers in this role will:

- Interact with end users to diagnose IT problems and implement solutions
- Document IT problems and evaluate the effectiveness of problem resolution
- Support systems security and standards

The Division of Health Care Reform and VITL will continue to focus on the needs of the Vermont HIT work force. VITL plans to hire interns from the CCV training program to support its REC program.

1.F.5 The Role of Broadband in Vermont Health Care Reform

Vermont's health reform vision includes a plan for ubiquitous health information exchange across the full continuum of health care providers. Enhanced broadband services across the state will provide a critical linchpin for this expansion. This will start with the interconnection of all of the state's hospitals and FQHC's. The eventual goal is to connect with all health care providers across the state.

Vermont's Office of Health Access and Health Care Reform is updating the State HIT Plan to include strategies for leveraging disparate HHS, ARRA, and health reform resources that can be brought together in Vermont to implement a unified, operational framework. Broadband infrastructure development is an essential component. Full health care system integration in Vermont means integrated care delivery with HIT connectivity and interoperable HIE systems (and telemedicine) via statewide broadband to all providers and health care institutions. Broadband is a critical component to deploy the efficient SAAS model EHR's which will be much more readily implemented in small provider offices.

Broadband Grants

Vermont is using multiple grants from the federal government to expand the state's broadband capacity.

- Vermont's Broadband Mapping Initiative is a collaborative broadband data collection and verification effort involving partners from the public, private and academic sectors participating as the Vermont Broadband Mapping Team. Major funding (\$1.2m) for this project comes from the National Telecommunications and Information Administration (NTIA), an agency of the U.S. Department of Commerce.

The Vermont Broadband Mapping Team has initiated the creation and development of a comprehensive geographic inventory of broadband service availability in the State of Vermont. Landline and wireless services (fixed and mobile) are being mapped, including wireless voice and data with information from broadband service providers and other sources. The broadband mapping information collected and verified through this effort is supporting the broadband development objectives identified in the RUS Broadband Initiatives Program (BIP) and NTIA's Broadband Technology Opportunities Program (BTOP) in Vermont. Most importantly, the geographic inventory will further refine our

understanding of the location of “unserved” and “underserved” areas in the state, thereby supporting targeted future investments in these areas.

The Vermont Broadband Mapping Team is composed of geospatial and telecommunications professionals with organizational missions intended to serve the public good. The Mapping Team is also composed of organizations that have worked together on various mapping related projects for many years. This combined experience is helping the Team meet the demanding requirements of NTIA’s Broadband Data and Development Grant Program. Team members include:

- Vermont Center for Geographic Information (VCGI) is providing geospatial data collection, aggregation, web mapping expertise and is the Prime Contractor for the NTIA grant,
- Vermont Department of Public Service (DPS) is providing telecommunications and data verification expertise, as well as acting as a liaison with broadband providers,
- Vermont Telecommunications Authority (VTA) is providing knowledge of current and future telecommunications initiatives in the state,
- Center for Rural Studies at the University of Vermont (CRS) is providing verification of provider coverage data by survey and an understanding of telecommunications needs in a rural context,
- Vermont’s Enhanced 9-1-1 Board (E911) is the provider of the statewide E911 address information that is supporting the Mapping Team’s address level mapping.

Grant For Vermont Council on Rural Development

The Vermont Council on Rural Development (VCRD) awarded a \$2.5 million grant from the U.S. Department of Commerce. VCRD is a non-profit dedicated to the support of locally defined progress of Vermont’s rural communities and has advocated for universal broadband service for 10 years.

This ARRA grant will complete the funding needed to launch VCRD’s “e-Vermont: The Vermont Community Broadband Project”, which will stimulate broadband use in 24 Vermont towns by identifying best practices for increasing sustainable broadband access.

During the next two years, the project will bring broadband to schools, businesses, local governments, libraries and other community agencies in areas of the state that have not yet received broadband access.

Broadband Telehealth Networks Grant

The Federal Communications Commission’s Rural Health Care Pilot Program is funding the build-out of broadband telehealth networks that will link hundreds of hospitals. Collectively, the 16 projects in this program are eligible to receive up to \$145 million in reimbursement for the deployment, including engineering and construction, of their regional telehealth networks. The networks will provide critical, high-speed information links that can save lives and reduce the cost of health care in their rural communities.

Vermont is a participant in the New England Telehealth Consortium along with Maine and New Hampshire. The \$25m award is funding a multi-state telehealth network to deliver remote trauma consultation and expansive telemedicine by linking approximately 500 primarily rural health care facilities – including hospitals, behavioral health sites, correctional facility clinics, and community health care centers – in the three states to urban hospitals and universities.

2. Operational Plan Overview

2.A. Introduction

Implementing Vermont's strategic vision for HIT will be done through the close coordination of the Division of Health Care Reform and VITL, which operates the Vermont HIE Network (VHIEN) and which is also the ONC funded Regional Extension Center (REC) for the state.

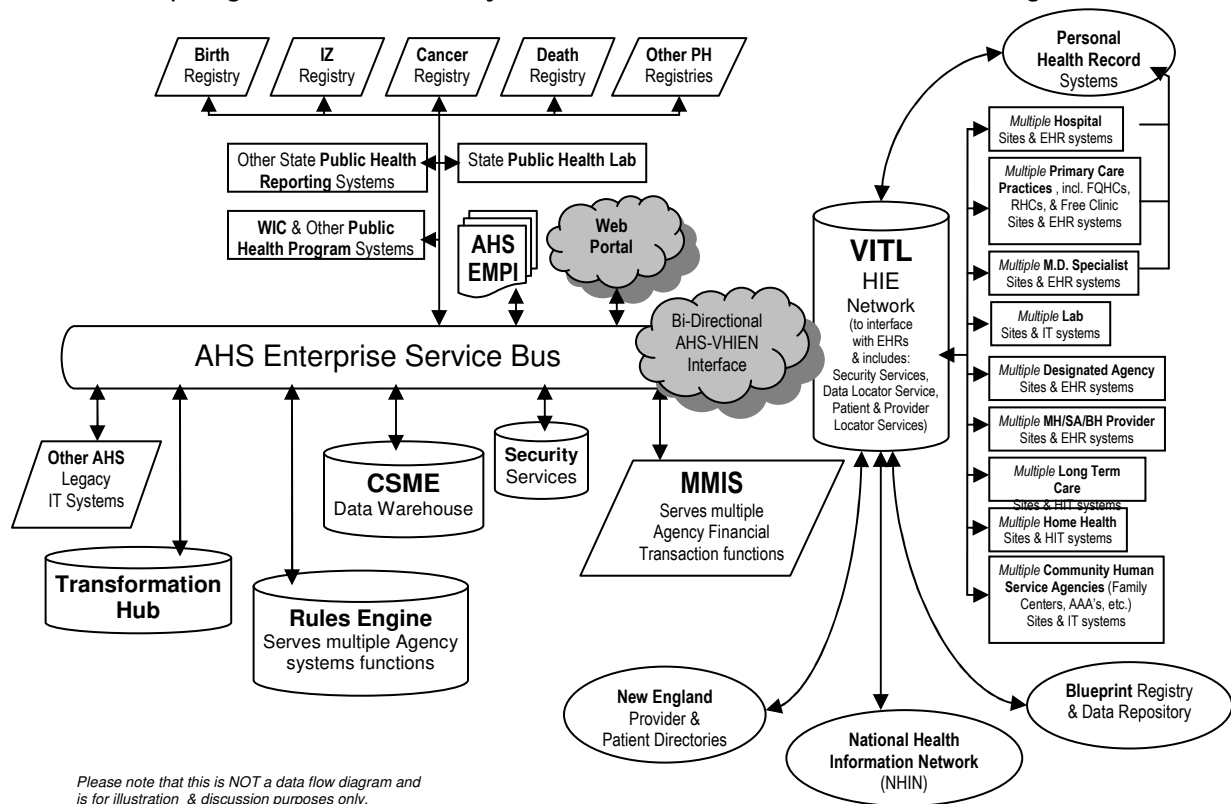
Vermont has chosen to co-locate the State HIT Coordinator with the state Medicaid agency, the Department of Vermont Health Access, in its Division of Health Care Reform, which manages the Sec. 3013 HIE Cooperative Agreement and also has responsibility for developing the State Medicaid HIT Plan (SMHP) and administering the Sec. 4201 provider incentive payment program. This ensures full, continuous integration and collaboration between the state HIE operation and Medicaid. The Division is also home to the Vermont Blueprint for Health, providing yet further opportunity to align and integrate delivery system reform and HIT-HIE.

In addition to the Division Director, who also serves as the State HIT Coordinator, and the Blueprint Director and staff, the Division employs an HIT-HCR Project Manager and an HIT-HCR Integration Manager. They have full time responsibility for ensuring the coordinated, collaborative roll out of EHR adoption, HIE connectivity, and Blueprint Medical home practice site and Community Health Team expansion. They will map and track the evolution of these complementary health reform domains from their current "as is" status to their planned "to be" implementation. They will track and manage the interdependencies between the complex set of expansion timelines and milestones, and they will be responsible, with the Division Director and VITL, for communicating with stakeholders as these operations are implemented.

Simultaneously, the Agency of Human Services is making major, complementary revisions, upgrades, and re-procurements of its IT systems. The public benefits electronic eligibility determination system, the Medicaid Management Information System (MMIS), and the underlying infrastructure of AHS IT are all being modernized. The first phase of the MMIS modernization includes development of a Service Oriented Architecture (SOA) to enable connectivity of disparate systems via an Enterprise Service Bus (ESB), a Workflow component (WF), a transformation hub (TH), an electronic Master Person Index (eMPI) solution, and an Identity Management (ID) solution. Division Project Managers also have responsibility for ensuring integration of these state Medicaid and AHS IT architecture components with the HIE.

This area of work and its alignment with HIT-HIE will be more fully described in the SMHP, but the illustration on the following page provides a visual sketch of the relationships. As the diagram illustrates – conceptually, not with technical specificity – this architecture ensures integrated development of interoperable data flows to and from public health registries through the HIE network from and to providers.

Relationship Diagram between AHS IT Systems & the Vermont Health Information Exchange Network



The Blueprint's IT infrastructure is another key component of the HIT-HIE infrastructure that will be aligned and integrated collaboratively by VITL and the Division, and that represents an additional layer of interdependencies. The Blueprint provides its medical home and community health team participants with a registry, reporting, and clinical data repository tool which can be populated directly or through feeds from EHRs and other sources (such as labs) directly and via the HIE. A scope of VITL's work, described in more detail below, includes ensuring that EHRs at Vermont practices are mapped to the Registry's data dictionary, to ensure automatic transmission of patient data to and from DocSite, where it can be used for panel management and care coordination, as well as cross-panel and disease specific reporting. (All EHR installations supported with funds from the State HIT Fund must be able to demonstrate the capacity to transmit data to the Blueprint IT infrastructure.)

All of these operations will be implemented in rapid fashion, with the Blueprint growing from a dozen practice sites in 2010 to at least 26 by July 2011 to over 225 by October 1, 2013. By July 1, 2011, the Blueprint will have a minimum of two Medical home practice sites in each Vermont Hospital Service Area (HSA), as well as Community Health Teams scaled to serve 20,000 patients each. Concurrently, VITL will be building out interoperable HIE connectivity to each hospital to ensure the availability of structured lab results and patient care summaries through the HIE by July 1, 2011.

Administrative Rules & Procedures pertaining to the processes for becoming a Blueprint Medical home and establishing Community Health Teams are currently in the development, public input, and adoption process and will go into effect no later than January 1, 2011. Many practices around

the state are already in various stages of “Blueprint readiness” preparations. Division staff and VITL hold bi-weekly status update meetings to manage the sequencing of the sites as they come on-line with EHR adoption and implementation, HIE connectivity, and DocSite integration.

2.B HIE Connectivity

Act 128 of 2010 requires hospitals to connect to the Health Information Exchange to support the Blueprint and meaningful use. At a minimum, hospitals will transmit patient demographic information and lab results. Hospitals may also be involved with the transmission of lab orders, transcribed orders and results, continuity of care documents (CCDs), and immunization data. The interfaces that are required will be dependent on the business practices of the hospitals and the practices in their region the hospitals support.

The HIE Connectivity project plan is in Figure 1A and schedule in Figure 1B. Each implementation listed on the schedule consists of a new instance of the HIE Project Plan.

2.C Blueprint for Health

VITL will enable connectivity between physician practices, Community Health Teams, and the Blueprint Registry for the secure transmission of patient demographic and clinical information.

The Blueprint project plan is in Figure 1C and schedule in Figure 1D. Each implementation listed on the schedule consists of a new instance of the Blueprint Project Plan.

2.D E-prescribing

Vermont is taking a multi-pronged approach to supporting e-prescribing. E-prescribing cannot occur if the pharmacy cannot accept and transmit electronic prescriptions. This is a particular issue among the small independent pharmacies. VITL is providing incentives and training to these businesses to upgrade their systems to accept electronic prescriptions.

Primary care providers with EHR’s who have not enabled e-prescribing are able to receive an incentive to help underwrite the costs of upgrading their system to enable e-prescribing. Prescribers who do not have an EHR and are not planning to implement in the very near future have access to a free-standing e-prescribing application support for its setup and use. It is our expectation that the use of e-prescribing will form a bridge to reduce some of these providers discomfort with technology.

VITL has developed a preferred vendor program as part of its Regional Extension Center responsibility. EHR vendors who are seeking the “preferred” designation must include e-prescribing functionality in the base product offered to Vermont providers as part of the state’s EHR expansion.

Figure 1A HIE Connectivity Project Plan

HIE Connectivity Plan		
ID		Task Name
1		Pre-Implementation
2		Application Process
3		Complete VITL Intake Process documentation
4		Agree to project goals and requirements
5		Identify participating practices
6		IT overview assessment
7		Customer Educations
8		HIPAA Privacy and Security, VITL consent policy
9		Application Process Complete
10		Contracts
11		Establish Contracts
12		BAA between client and VITL
13		BAA between client and EHR vendor
14		Contract process Completed
15		Documentation
16		SOW
17		Create Initial SOW Draft
18		GE Review SOW
19		All party review of SOW
20		SOW Completed
21		Generate Work Orders
22		Design Document
23		Technical Design Document kick-off meeting
24		Draft Design Document
25		GE create initial draft with connecting
26		Sign off
27		Review Design Document
28		Update Design Document from EMR/TPS
29		Publish Final Draft
30		Design Document sign off
31		Design Completed
32		Test Plans
33		Create VHIE Connectivity Test Plan
34		Create Client UAT Test Plans
35		Go Live Check list
36		Create VHIE/GE Check List
37		Create Client Check list
38		Create TPS Check list
39		Create combined checklist
40		End Check off list
41		Resource Readiness

Page 1

HIE Connectivity Plan		
ID		Task Name
42		Request Resources from all parties
43		Schedule Kick-off Meeting
44		End Resource Readiness
45		Pro Forma Project Plan
46		Build project plan based on design document
47		Review project plan with all parties
48		Implementation
49		Implementation Documentation
50		Design Document
51		Technical Design Document kick-off meeting
52		Draft design document
53		GE create initial draft with connecting VHIE
54		Review design document
55		Update Design Document from EMR/TPS
56		Publish final Design Document
57		Test Plans
58		Create VHIE Connectivity test Plan
59		Create Client UAT Test plans
60		Go Live Check list
61		Create VHE/GE
62		Create Client
63		Create TPS
64		Create combined checklist
65		Complete Check off list
66		Implementation Documentation Complete
67		VHIE VPN Connection
68		VPN Form Sent to GE
69		GE Deployment request VPN build from Connectivity Team
70		Connectivity Team schedules a meeting with client
71		Connectivity Team and build and test VPN
72		Firewall Policy Change Request to Firewall Team
73		Firewall Team opens port
74		GE Deployment team test with client end to end connectivity
75		Repeat process per connection
76		End Connectivity
77		Connectivity Team schedules a meeting with client
78		Connectivity Services (Lab, Radiology results sent to Practice))
79		LOINC Mapping Spreadsheet
80		Lab loads the Order codes and with results code spreadsheet
81		3M matches LOINC codes
82		Lab reviews open questions with 3M
Page 2		

HIE Connectivity Plan		
ID		Task Name
83		Finalized LOINC Mappings
84		Mappings and OID set-up
85		Pework req completed
86		Final Mapping document reviewed
87		Add CPT+ codes
88		Build and send compendium for receiving system
89		Set-up OID's
90		Set up Test Environment
91		Code Mappings
92		Set up code system/assigning authorities
93		Load local lab codes
94		Update LOINC dictionary
95		Update CPT dictionary
96		Map order codes
97		Map result codes
98		Route Set-up
99		Set-up configure states
100		Set-up and configure links
101		Test Route Internal
102		Point to Point test with client (includes schedule time with client)
103		End Route set-up
104		End test system set-up
105		Custom Scripting - Resolves system conflicts (Not always required)
106		Review Design Document calls out script requirements
107		Script coded (depends on the complexity)
108		Tested Internal
109		Tech Reviewed
110		Debug
111		Retest Internal
112		Deploy code
113		Add new script to Route set-up
114		Schedule testing with customer
115		Test with customer
116		End custom scripting
117		VHIE Interface Testing/GE
118		System Configuration test from Source to Target/Destination
119		Debug
120		Retest
121		End testing
122		Client Side User Acceptance Testing
123		Connectivity Services UAT
Page 3		

HIE Connectivity Plan		
ID		Task Name
124		Client Side/End User Validation
125		Client Testing
126		UAT - New Lab
127		Debug
128		Retest- Request GE resource as needed during this phase
129		Update Design document if required
130		End UAT
131		Set-up Production for Go Live
132		Go Live planning
133		Notify all parties of Go live date
134		Review go-live check list
135		Client Side Configuration
136		Sending System configure Production (Dictionary, connectivity, promote processing logic)
137		Receiving System configure Production (Dictionary, connectivity, promote processing logic)
138		GE configure Production
139		Set-up codes and mappings
140		Route set-up
141		Scripts Logic added which requires a build
142		Internal testing - Connectivity and Route
143		End Production Set-up
144		Point to Point Testing
145		Smoke Test Production with Clients - Send data from Source to Target
146		Production ready task completed - Go Live
147		Go Live check off list reviewed and signed off
148		System Live
149		Post Implementation
150		Post Live
151		Clinical measures
152		Completeness / accuracy of data
153		Support Team Handoff

HIE Connectivity Schedule

	2010												2011												2012					
	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June		
Implementation																														
FAHC																														
SVMC																														
NMC																														
CVMC																														
NVPH (Northeastern)																														
MA Scoutney																														
Brattleboro																														
North Country Hospital																														
RRMC																														
Coplay																														
Porter Hospital																														
Grace Cottage																														
Gifford Medical Center																														
Springfield Hospital																														
Other																														

FY11 HIE and BP Connectivity Schedule 06-01-10

tsb: HIE

1 of 1

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Figure 1C Blueprint Project Plan































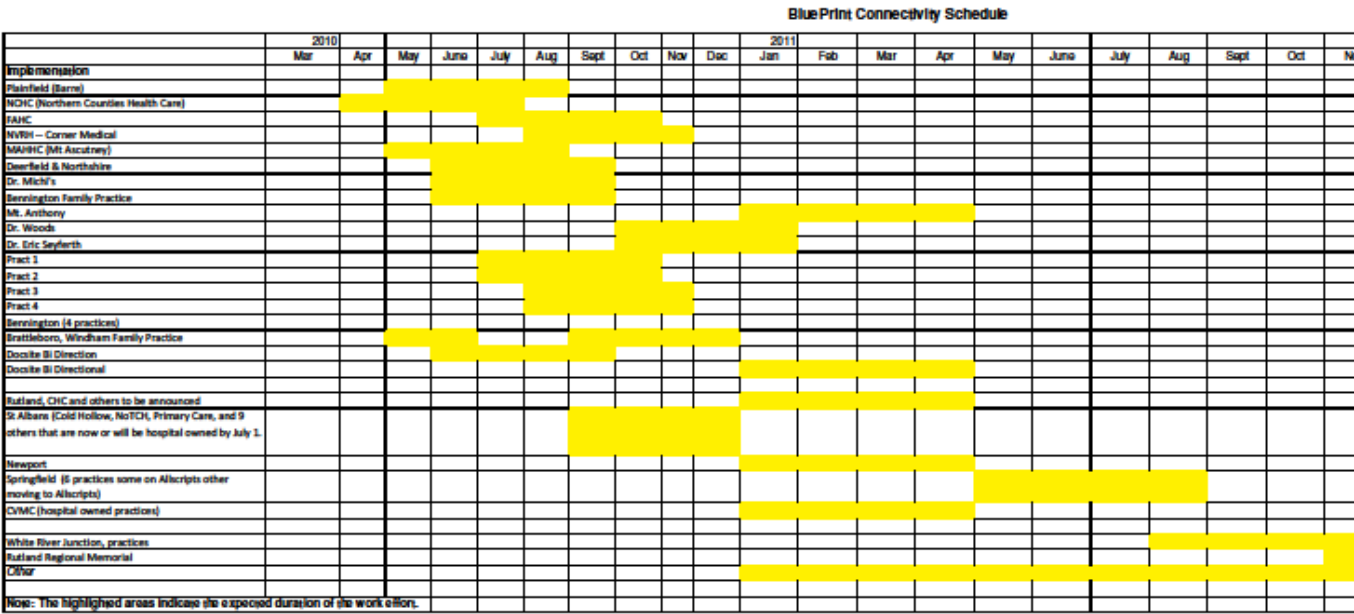
Blueprint Project Plan		
ID		Task Name
42		Patient education materials
43		Patient consent - if applicable
44		Policies
45		System Testing
46		Technical Design Document
47		Connection to VITL - VPN
48		Set up sites and providers in QA and Prod Docsite
49		Establish GE QA and Prod sites
50		Validate ADT
51		Validate Opt in validation
52		Validate fully stuffed CCD
53		Validation of data to Docsite
54		Smoke test Bulk load
55		Staff Training on Docsite
56		Reports and data mining
57		Establish a super user for account management
58		User Acceptance Testing (UAT)
59		Develop a User Acceptance test plan (see attachment)
60		Complete and accurate data in Docsite
61		Understanding of reporting functions in Docsite
62		Go-Live
63		Go-Live Activity
64		Bulk load
65		Live ADT
66		Live CCD
67		Process to Docsite
68		Post Implementation
69		Post Live
70		Clinical measures
71		Completeness / accuracy of data
Page 2		

Figure 1D Blueprint
Schedule



3. ONC Strategic and Operational Domain Requirements

ONC guidance asks for the inclusion of five key elements or domains of HIE planning: Governance, Financial Sustainability, Technical Infrastructure, Business & Technical Operations, and Legal / Policy. Because Vermont has an operational HIE that has begun to implement these key elements, the VHITP integrates the strategic underpinnings with the operational details provided below.

3.A Governance

3.A.1. Collaborative Governance Model

As described above in Section 1.A., Vermont's HIE governance structure has gone through evolutionary development. Originally chartered by the state to develop both the *Vermont HIT Plan* (VHITP) and statewide HIE, VITL took the original role in convening stakeholders and establishing the framework for HIT policy and HIE governance. VITL's original Board structure included nearly two dozen Directors, providing broad representation of government, consumer, and stakeholder interests. VITL also operated a series of open, public work groups, including the HIT Plan Advisory Committee, a Provider Work Group, and a Privacy & Security Work Group.

In 2009, Act 61 specified a governance model that divides policy coordination and oversight (now placed with the state) from HIE operations and implementation. Accordingly, the State Government HIT Coordinator now convenes public meetings and work groups to ensure full public participation in the process of HIT-HIE policy implementation, and VITL's Board of Directors provide governance for the HIE itself, as well as other programs VITL operates (such as its current e-Prescribing initiative and its role as the state's Regional HIT Extension Center).

Vermont has structured its governance model to reflect and integrate with the federal HIT-HIE policy structure enacted in the HITECH Act. Act 61 requires the state to produce and annually update a state HIT Plan that mirrors the requirements and process placed on ONC for the federal HIT Plan. (See Appendix A for complete Vermont statute.) As noted on page 2 of this plan, the VHITP serves to meet both the federal and state statutory requirements.

3.A.2. State HIT Coordinator

The State HIT Coordinator is directly accountable to the Governor and the General Assembly and is responsible for coordinating and convening multi-disciplinary input from broad HIT and HIE stakeholders. The Coordinator is also responsible for ensuring alignment and collaboration with ARRA funded programs across state government.

Currently, the Coordinator convenes:

- a) the monthly General HIT Stakeholders meeting to provide input on HIT-HIE policy issues and sub-groups on Privacy & Security, Communication, and HIE Planning;
- b) the HIT & Higher Education Work Group designed to ensure collaboration for both HIT workforce and university-based HIT research efforts across the state; and
- c) the state Regional HIT Extension Center Advisory Board.

As noted State HIT Coordinator also Directs the Division of Health Care Reform in the Department of Vermont Health Access, the state Medicaid agency. The Division Director / State

HIT Coordinator works closely with the Director of the Vermont Blueprint for Health to ensure full integration of HIT-HIE policy and health care reform implementation.

The Division's work is also supported by two DVHA HIT-HCR Project Managers and the HIT-HCR Integration Manager who, with the Director, form the leadership team overseeing HIT Coordination both inside and outside state government. They collaborate closely with the Agency of Human Services CIO and the Associate CIO for Health. They are focused on coordination with Medicaid and the Agency's IT programs and projects, including the re-procurement of Vermont's MMIS system and modernization of state program eligibility systems. Other new positions, focused on the coordination of the Medicaid HIT Incentive Payment program, are being developed through the CMS HIT Planning – Advanced Planning Document process. A state Assistant Attorney General position to take the lead on Privacy and Security Policy is also under development.

Vermont's State HIT Coordinator has the responsibility to ensure that the state's HIT-HIE initiatives are fully integrated and collaborative, both across internal government systems, initiatives, and programs, as well as HIT-HIE programs and initiatives outside of state government. This is fully embedded in the Division Director's responsibility for collaboration of all the state's health reform initiatives both across internal government systems, initiatives, and programs, as well as health reform programs and initiatives outside of state government.

HIT-HIE is a significant state priority. In a time of budget challenges and staffing reductions, Vermont will be adding limited service positions to support these initiatives. Vermont Governor James Douglas serves as founding Co-Chair of the State Alliance for e-Health. As such, the Governor has provided strong historic support for HIT-HIE initiatives in the state and its integral role in health reform. With the Commissioner of DVHA and the Blueprint Director, the Division Director serves as a senior health policy advisor to the Governor. They have the access and ability to raise issues to that level as necessary, to ensure a consistent, unified approach to HIT-HIE across state government and with the external partners who are equally important to successful implementation.

3.A.3. Accountability and Transparency

Accountability, transparency, and engagement with the public is a longstanding Vermont tradition and is codified in Section 8 of Act 61 of 2009, which requires that "the state shall consult with and consider the recommendations of:

- (1) Health care and human service providers, including those who provide services to low income and underserved populations;
- (2) Health insurers;
- (3) Patient or consumer organizations that represent the population to be served;
- (4) Health information technology vendors;
- (5) Health care purchasers and employers;
- (6) All relevant state agencies, including the department of banking, insurance, securities, and health care administration; the department of information and innovation; and the agency of human services;
- (7) Health profession schools, universities, and colleges;
- (8) Clinical researchers;

- (9) Other users of health information technology, such as health care providers' support and clerical staff and others involved in patient care and care coordination; and
- (10) Such other entities as the Secretary of Health and Human Services determines appropriate."

As noted, this plan reflects engagement with those constituencies, who continue to be engaged through the monthly General Stakeholder meetings, Medicaid Advisory Board meetings, state Health Care Cabinet meetings, the annual legislative process, and through both standing and *ad hoc* committees convened by the HIT Coordinator or VITL.

3.B Financial Sustainability

Per 32 V.S.A. chapter 241 § 10301, Vermont collects a fee (2/10ths of 1%) on all health insurance claims that generates annual revenues for the state Health IT Fund which then provides grants to support HIT and HIE. While the Fund sunsets in 2015, it will provide substantial capacity to match federal funds available through both ONC and CMS to provide for the statewide build out of the HIE infrastructure.

VITL is in the process of rebidding for its HIE subcontractor to ensure that the match of services and costs create a viable underlying cost structure.

VITL already has a subscription model in place, although fees are currently waived. It is anticipated that by 2015, the value added to the state's health care providers and consumers by ubiquitous, bi-directional exchange of health information will be so substantial that the on-going business case for on-going incremental fee structures will be fully evident. VITL will be building out its sustainability model for both HIE and EHR support during the last half of 2010.

In addition to support from providers and commercial health plans, ARRA provides opportunities for support to HIE sustainability in both the short and longer term. VITL will receive substantial annual funding for HIE as a grantee of the State of Vermont utilizing Section 3013 HIE Cooperative Agreement funding. While guidance from a CMS State Medicaid Directors letter (SMD) is pending, Vermont anticipates funding for both HIE expansion / implementation and an allocated percentage of sustaining funding to come from a combination of Medicaid Section 4201 and MMIS spending authorities. Full details of this will be included in the SMHP upon release of the SMD.

While Medicare funding for HIE is not yet an articulated policy, most State HIT Coordinators and state HIE stakeholders have expressed strong support for Medicare contributing its share of the cost of HIE since Medicare providers and beneficiaries will both benefit from the HIE infrastructure now in development and expanding operation.

3.C Technical Infrastructure

3.C.1. Interoperability

The Vermont Health Information Exchange Network (VHIEN), which is operated by VITL under the authority of 18 V.S.A. chapter 219 § 9352, has been designed from the ground up to be fully compliant with national standards for HIE. The Healthcare Information Technology Standards

Panel (HITSP) recognized VITL as one of five “real life” stories in January 2009 and HITSP included VITL in its webinar series in July 2009. The VHIEN uses the following HITSP constructs and Integrating the Healthcare Enterprise (IHE) profiles.

- TP22 (IHE PIX Patient Look-up by ID) and T23 (IHE PDQ Patient Look-up by Demographics) for integration with master patient index
- TP13 (IHE XDS) for document sharing
- TP23 (IHE XDS) for document storage and retrieval
- T14 (HL7 V2.4) for exchange of lab results
- C32 (IHE XDS-MS CDA-CCD) for exchange of health summary information
- C37 (IHE XD*-Lab) for exchange of lab data

As presently configured, the VHIEN supports TP15 (IHE-ATNA) for audit logging and TP17 (IHE-ATNA) for secure node communication, as well as T16 (IHE CT) for consistent time. There is planned support of TP30 (IHE-BPPC) for consents.

Because the VHIEN has been designed to be compliant with national standards, participation in the NHIN can be accomplished easily with a minimum of additional technical work. VITL encourages EHR vendors serving Vermont physician practices to make their products compliant with the above national standards, and interoperable with the Vermont HIE Network. This is achieved through an annual interoperability demonstration at the VITL Summit conference. The demonstration, modeled on one at the national HIMSS conference, features vendors accessing data on the VHIEN, modifying it as a provider would when seeing a patient, and then publishing updated data for the next provider in the health care continuum to use when treating the patient.

3.C.2. Technical Architecture/Approach

The Vermont Health Information Exchange uses a hybrid architecture, with some functions federated throughout the network and others centralized. For example, there is a central data repository for aggregating data from multiple sources participating in the Blueprint for Health initiative. Once the data is aggregated, it is transmitted to the Blueprint registry, which providers then access to analyze the aggregated data. Access to other data remains federated, with each health care organization assigned its own local repository. There is a master person index, which uses demographic feeds from each participating provider and algorithms to accurately match records located in the various repositories to a unique individual. Participating health care providers conduct a search for an individual in the MPI, and once the person is found, a list of available clinical documents for the individual is presented to the HIE user. The authorized user then clicks on a link to open the document, and if he or she wishes, can import that document into the organization’s electronic medical record for the individual patient.

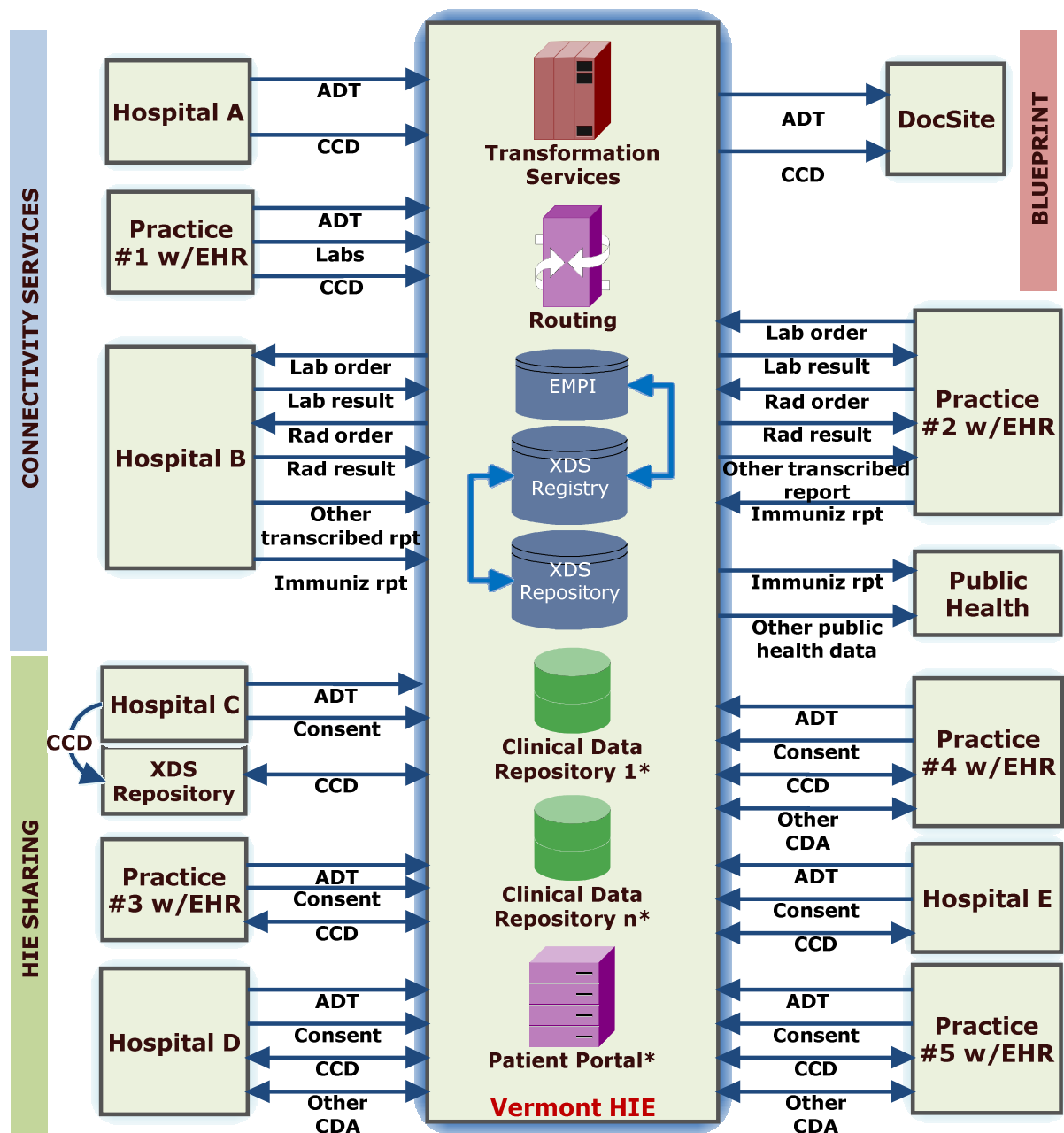
The Vermont Health Information Exchange became active in April 2007, with the first use being the delivery of electronic medication histories to ED physicians. The next use was electronic lab result delivery to physician EHR’s, which commenced in the fall of 2008. By the end of 2008, the Vermont HIE was being used to aggregate data from the EHR’s of physicians participating in the Blueprint for Health initiative (using the continuity of care document standard) and transmit that data to the Blueprint registry. The next phase of the HIE will be the implementation of bi-directional health information exchange between providers in a hospital service area, using the CCD. Once the initial implementation of bi-directional HIE has been accomplished, the service will be rolled out to providers across the state. Interface development is underway for the delivery

of radiology reports from hospitals to physician practices, electronic ordering of both lab and imaging tests, and electronic reporting of immunizations to the Vermont Immunization Registry.

Vermont Health Information Exchange Core Components

The VHIE transforms, stores and routes health information among health care providers. It employs version 2 HL7 messages as well as Clinical Document Architecture documents, the latter the native format of the VHIE's document sharing service. See the figure below.

VHIE Core Components



*Future. All other VHIE components are operational.

VITL - 1Apr10

Glossary:

ADT	HL7 message containing Admit/Discharge/Transfer information about a patient
CCD	Continuity of Care Document, containing key information about a patient; a type of CDA document
CDA	HL7 Clinical Document Architecture: a system of XML structured electronic documents to capture information about individual patients
DocSite	A web-based registry for managing populations' health maintenance and medical conditions
EMPI	Enterprise Master Person Index: Stores and manages patient identities from many different external systems
VHIE	Vermont Health Information Exchange: The state's system for sharing and routing health data

Vermont HIE components:

1. Transformation services: The VHIE can translate from one code set to another (e.g., from a local laboratory observation code to LOINC); transform a message from one format to another (e.g., from HL7 v. 2.3 MDM to HL7 CCD); and perform various processes to ensure interoperability between disparate systems.
2. Routing: The VHIE delivers messages and documents to many destinations. As part of its Connectivity Services, it routes data that it receives from sending systems (such as laboratories) to designated recipients (such as primary care practices or DocSite). Routing includes optional intermediate stops for transformation services.
3. Enterprise Master Person Index (EMPI): A core component of HIE sharing, the EMPI keeps track of all patient identities and cross-references them as the VHIE receives new identity information from participants. HIE sharing relies upon proper identification of a patient before the VHIE associates any clinical data with that patient and shares the data.
4. XDS Registry: Another HIE sharing core component, the Registry is an index of all health information documents available through the HIE. Participants requesting information about a patient first receive metadata from the Registry describing the available documents.
5. XDS Repository: The XDS Registry's metadata points to the XDS Repository, where the actual documents reside. Participants "publish" (save, or store) documents to and "retrieve" them from the Repository. Participants may choose to use the Repository in the VHIE data center or to host their own. In either case, the VHIE Registry maintains pointers to the available documents.
6. Clinical Data Repository (CDR): The VHIE can store data for purposes other than HIE sharing (such as aggregation and reporting), and in formats other than XDS (such as an SQL database).
7. Patient Portal: Patients will have the opportunity to view their health information stored in the XDS Repository. They will also be able to request an audit report detailing which VHIE participants have accessed which documents in the XDS Repository.
8. Additional: VITL will continue to add components to the VHIE as needs and technology solutions arise.

Vermont HIE services:

1. Connectivity Services: The VHIE primarily routes HL7 v2.x messages that it receives from one external system (e.g., lab) to another external system (e.g., PCP). Interfaces in

- the VHIE and in external systems facilitate transformation and routing specific to each customer and type of data.
2. **HIE Sharing:** Participants share clinical data with one another through the XDS system. Participants may “publish” their clinical documents to the VHIE-hosted XDS Repository, or they may host their own. In either case, each published document is registered with the VHIE’s XDS Registry, thereby making the document known and accessible to participants. HIE sharing addresses myriad use cases from hospital transfers to specialty referrals.

3.D. Business and Technical Operations

Rationale: Deploy the HIE in a manner that quickly provides value to the practicing clinician and creates a platform for broad information exchange and clinical collaboration. Build on that base to deploy a standard complement of interfaces.

Current state: The HIE lab results delivery service is currently active in four of fourteen hospital service areas. Work is underway to activate it with the tertiary hospital provider in the state. Statewide deployment of this service will be complete by mid-2011.

The medication history service is active in three hospitals. Cost has been a barrier to expanding this service to the remainder of the state.

Data for the Blueprint for Health initiative is being gathered in three hospital service areas, with additional sites in progress. Increased funding from ARRA and other sources will help accelerate the rollout of this service.

Plan:

- Complete deployment of laboratory results to all HSA’s by July, 2011.
- Expand options for medication history in coordination with deployment of e-prescribing supported through a HRSA grant. The grant will support connecting independent pharmacies in the state to the Surescripts network and will provide incentives to providers to deploy and use e-prescribing – either as part of their EHR or as a free-standing tool.
- Deploy full complement of interfaces into HSA’s which are leading expansion of the Blueprint for Health.

3.E Legal/policy

3.E.1. Privacy and Security–

Rationale: Highly reliable and transparent privacy and security policies and practices are critical to the acceptance of electronic health information and HIE by the citizens of Vermont.

Current state: In 2008 and early 2009, VITL conducted a statewide process to engage consumer and provider stakeholders on the issue of privacy and security, and developed a set of six privacy and security policies to govern the operation of the Vermont Health Information Exchange.

As part of this process, federal and state laws and regulations were analyzed. This analysis also included the HHS Privacy and Security Framework, to ensure that the privacy principles in the

framework were reflected in the privacy and security policies adopted by the VITL Board in April 2009. A further review and revision of those policies focused on secondary use criteria was conducted over the summer and approved by the VITL Board in September 2009. The complete set of VITL's privacy and security policies appears in Appendix B, along with a discussion document: "Application of Law to the Privacy and Security Framework of a Health Information Exchange Network."

Plan:

- Coordinate adoption of privacy and security policies and procedures with all health systems in the state as part of HIE deployment
- Create easily understood material to support opt in consent procedures required by state law.
- Work with neighboring states to facilitate interstate HIE in conformance with state laws.
- Create position in state government with responsibility for oversight of HIE Privacy & Security policies.

3.E.2. State Laws –

The process to develop HIE privacy and security policies included a legal review of all applicable state laws. Policies were written to ensure compliance. Because Vermont's privacy law is more strict than HIPAA, it was determined that Vermont must use an opt-in model for HIE. That model is reflected in the policy on patient consent. At this time, there are no plans to modify state laws.

Vermont has communicated with the neighboring health information exchanges in New York, Massachusetts, Connecticut, Rhode Island, and Maine, as well as with the academic medical center in New Hampshire. Interstate information exchange is critical to effective support of care delivery in a state which provides support to patients in other states and relies on their providers for care to Vermonters. Discussions will continue to develop plans to align varying legal requirements to permit cross border exchange. VITL also actively participated in the HISPC national collaboration.

The State of Vermont and VITL are participating in both regionally focused and national multi-state collaborative projects working on legal and policy issues related interstate exchange of health information. In addition, Vermont is now represented on the Markle Foundation *Connecting For Health* Steering Group, which is devoting considerable time and resources to support national HIE policies that will work for states and for multi-state entities.

3.E.3. Policies and Procedures

In April 2009, VITL's board of directors adopted a comprehensive set of privacy and security policies and agreements, including: Policy on Participating Health Care Provider Policies and Procedures for the VHIEN, Policy on Patient Consent to Opt In to VHIEN, Policy on Secondary Use of Identifiable PHI on VHIEN, Policy on Information Security, Policy on Privacy and Security Events, and Policy on Auditing and Access Monitoring. The policies are currently in use by hospitals in multiple Vermont hospital service areas as models for HIE among providers in those communities and will be deployed statewide as the VHIEN is built out in calendar 2010. A set of model policies and agreements is part of the "implementation toolkit" provided to all practices and institutions working with VITL. These policies, including proposed revisions to the Secondary Use policy (currently open to public comment), are included as Appendix B.

3.E.4. Trust Agreements

Current state: From the beginning, the Vermont HIE Network has required that business associate agreements and contract terms be signed with each participating organization. In fact, technical work does not begin on an interface or other project until the agreements have been signed by all parties. These agreements spell out in detail how data is to be used between organizations.

Plan: Leverage current agreements to facilitate statewide expansion and work with counterparts in adjoining states to develop agreements in conformance with other state law, policies and procedures.

3.E.5. Oversight of Information Exchange and Enforcement

Vermont statute 18 V.S.A. chapter 219 § 9351(f) requires that Vermont HIT and HIE programs “shall be consistent with the goals outlined in the strategic plan developed by the Office of the National Coordinator for Health Information Technology and the statewide health information technology plan.” In the event that providers, individuals, or other entities are not compliant with state and federal policy, the state has the option to pursue enforcement. Act 61, enacted during the 2009 legislative session, provides several compliance mechanisms including:

- Sec. 5. 18 V.S.A. § 9437 gives the commissioner of Banking, Insurance, Securities, and Health Care Administration has the authority to require that the Certificate of Need (CON) application for a large hospital HIT project “conforms with the health information technology plan established under section 903 of Title 22....”.
- Sec. § 9352 authorizes VITL to require that Health Information Technology systems acquired under a VITL grant or loan comply with data standards for interoperability adopted by VITL and the state health information technology plan.
- Sec. § 9352 also authorizes VITL, following federal guidelines and state policies, if enacted, to certify the meaningful use of health information technology and electronic health records by health care providers licensed in Vermont. Without meaningful use certification, providers will not qualify for the Medicaid incentives created in the ARRA/HITECH act.

The VHIE privacy and security policies contain a procedure for dealing with individuals and organizations that are not compliant with the policies. Sanctions may include permanent exclusion from participating in the VHIE. The legal analysis does note that in the event that an individual has a complaint relating to the use or disclosure of his or her protected health information, a professional grievance against the health care provider or facility responsible may be submitted for review by the licensing authority of that provider or facility. The analysis also points out that “The Secretary of the US Department of Health and Human Services also has the authority to impose civil monetary penalties as set forth in 45 CFR §160.404 as amended by HITECH Act § 13410 and which extends enforcement to State Attorneys General.

4. Operational Issues and Considerations

4.A Ensuring Support for Meaningful Use

Meaningful use support is baked into the operating model of VITL as Vermont's Regional Extension Center. The collaboration between the state Division of Health Care Reform and VITL ensures that program requirements for federal programs and state requirements are coordinated and integrated. The plan for target practices for the REC will be to build integrated plans for their EHR deployment, HIE interface, meaningful use and Blueprint participation. The same approach will be used in working with practices that are not eligible for REC services, but will still need help achieving meaningful use.

4.B Interstate Exchange

Interstate exchange of health information is critical the Vermont, indeed, the northeast medical world. We are small states with many of our residents near borders and accessing care in adjoining states or coming to Vermont for care. Vermont's second most important tertiary care center is Dartmouth Hitchcock Medical Center in Lebanon, NH. Many NY residents use the tertiary facilities at Fletcher Allen Health Care in Burlington. The pattern of interstate care is summarized in the table below.

In and Out Migration Summary – 2008	
14% of discharges by VT Hospitals are for Out-Of-State Residents	
21% of discharges for VT Residents are in NH-NY-Mass	
	70% of these are DHMC discharges
	13% of these are in Other NH Hospitals
	9% of these are in Mass Hospitals
	8% of these are in NY Hospitals
40% of VT Resident Discharges from VT Hospitals were from FAHC	

Vermont is working in collaboration with its fellow New England States and New York on an initiative convened by the New England State Consortium Systems Organization (NESCO) to build our capacity to exchange across our borders. An MOU is in development to build a common architecture for interstate exchange and, as a first project, build a provider directory architecture to a common specification across all participating states. A jointly accessible directory will provide a critical piece of infrastructure to support point-to-point exchange using vehicles such as NHIN Direct.

The NESCO Collaboration will provide the basis for further information sharing based on demand and the capability to navigate variations in privacy law and consent policies in the participating states. However, meaningful exchange between providers in the interim will go a long way towards meeting care needs.

4.C Integration of Milestones Across Domains

As addressed in detail at 1.D.1 above, the ONC and Medicaid funded HIT-HIE activities in Vermont – including REC and Eligible Provider / Eligible Hospital meaningful use incentive program support – are fully integrated at both the governance and operational levels.

The Division will maintain a comprehensive project management planning database to track the various implementation domains of statewide expansion of the Blueprint and of HIT in tandem, tracking adoption, implementation and upgrades of Electronic Health Records (EHR), interoperable connectivity to the Vermont Health Information Exchange Network (VHIEN) and to the Blueprint Registry, registration and certification of Blueprint medical homes, and designation and geographic definition of community health teams.

A delivery systems reform “war room” will track status of each implementation domain, updated weekly through a project management reporting infrastructure implemented across the Division of Health Care Reform and in partnership with VITL. Every provider in the state – not just ARRA funding Eligible Providers and Eligible Hospitals – but all Vermont providers (plus many from neighboring MA, NH, and NY) are indexed in a common file that will be updated by the state and utilized by the state and VITL. The SMHP will provide a comprehensive road map with more information about the integrated project management system that will track all Vermont providers from their “as is” to “to be” state across domains, and it will be a central tool in ensuring fully aligned and integrated work being done by the state, its partners, and practices, hospitals, and other health professionals on the ground in communities across the state.

The system will produce both maps and dashboard reports that the HIT-HCR Project Management and Integration leadership team will use to ensure maximum program alignment, watch for early warning signs to anticipate and correct for potential delays or other execution miscues, and drive the projects toward successful, integrated implementation on time and on budget.

4.D Risks and Risk Mitigation

Competing priorities from providers and hospitals slow progress:

Tight budgets, changing reimbursement programs and competing technology challenges are real challenges for our hospitals and providers. By staying tightly integrated with reform efforts, executing on the HIT Plan becomes part of the solution to the challenges being faced rather than an obstacle.

Ongoing work with stakeholders and legislative leaders will help maintain alignment of goals and provide collaborative opportunities to assist providers and hospitals.

Changing federal or state priorities impact funding and support:

Inconsistent policy messages can create hesitancy in an already anxious provider community. HIT leadership in Vermont works with state leaders and participates in national forums to maintain momentum to complete the work ahead.

Maintaining close goal alignment with the clinical transformation initiatives of the Blueprint for Health creates a more clinical and reliable focal point for the HIT change agenda and mitigates the potential adverse impact of varying messages from policy leaders.

Perceived difficulty in receiving CMS incentive slows momentum

The meaningful use incentives are a major driver in providers interest in adopting EHR's and exchanging information. As practices assess the meaningful use targets, it is important that the state and the REC assist them in developing explicit strategies to achieve their goals so that perceptions will be trumped by doable action plans.

Tying the value of HIT to the state's clinical transformation agenda will help to remind practices that their efforts are about more than the incentives and that the value of an improved delivery system will be enduring.

High visibility issue arises which impacts perceived value of program

Implementation failures, security breaches, vendor issues and other challenges will arise as part of the HIT/HIE deployments nationally. These issues will impact the perceived risks and value of the programs for our practices in Vermont. Our approach: (1) Do all we can from a planning and execution perspective to minimize avoidable failures in Vermont; (2) Be as transparent and inclusive in our communication as possible to avoid misperception failures; and (3) Focus the value discussion on the clinical and health system impacts of the program and away from the technology so as to distance our value discussions from examples of technology failure.

Critical state or VITL staff turnover

Over the course of a multiyear project, there will be turnover of important staff at the state political and administrative levels, at VITL and among important stakeholders. The key for the state leaders and stakeholders is to ensure broad communication with relevant staff so that the level of understanding and program support remains broad-based enough to weather all but the most cataclysmic changes.

Within VITL and at core administrative functions, explicit succession planning and knowledge transfer from key staff to the organization as a whole will reduce, but not eliminate, adverse impacts. Continuing a positive program focused on delivering highly effective support to the state's health system and citizens will ensure that vacancies are filled quickly by excellent candidates drawn to the quality of the program.

Appendix A

Excerpts from Act 61 of 2009 – An act relating to health care reform

It is hereby enacted by the General Assembly of the State of Vermont:

* * * Implementing Health Care Provisions of the American Recovery and
Reinvestment Act * * *

Sec. 1. 18 V.S.A. chapter 219 is added to read:

CHAPTER 219. HEALTH INFORMATION TECHNOLOGY

§ 9351. HEALTH INFORMATION TECHNOLOGY PLAN

(a) The secretary of administration or designee shall be responsible for the overall coordination of Vermont's statewide health information technology plan. The secretary or designee shall administer and update the plan as needed, which shall include the implementation of an integrated electronic health information infrastructure for the sharing of electronic health information among health care facilities, health care professionals, public and private payers, and patients. The plan shall include standards and protocols designed to promote patient education, patient privacy, physician best practices, electronic connectivity to health care data, and, overall, a more efficient and less costly means of delivering quality health care in Vermont.

(b) The health information technology plan shall:

(1) support the effective, efficient, statewide use of electronic health information in patient care, health care policymaking, clinical research, health care financing, and continuous quality improvements;

(2) educate the general public and health care professionals about the value of an electronic health infrastructure for improving patient care;

(3) ensure the use of national standards for the development of an interoperable system, which shall include provisions relating to security, privacy, data content, structures and format, vocabulary, and transmission protocols;

(4) propose strategic investments in equipment and other infrastructure elements that will facilitate the ongoing development of a statewide infrastructure;

(5) recommend funding mechanisms for the ongoing development and maintenance costs of a statewide health information system, including funding options and an implementation strategy for a loan and grant program;

(6) incorporate the existing health care information technology initiatives to the extent feasible in order to avoid incompatible systems and duplicative efforts;

(7) integrate the information technology components of the Blueprint for Health established in chapter 13 of this title, the agency of human services' enterprise master patient index, and all other Medicaid management information systems being developed by the office of Vermont health access, information technology components of the quality assurance system, the program to capitalize with loans and grants electronic medical record systems in primary care practices, and any other information technology initiatives coordinated by the secretary of administration pursuant to section 2222a of Title 3; and

(8) address issues related to data ownership, governance, and confidentiality and security of patient information.

(c) The secretary of administration or designee shall update the plan annually to reflect emerging technologies, the state's changing needs, and such other areas as the secretary or designee deems appropriate. The secretary or designee shall solicit recommendations from Vermont Information Technology Leaders, Inc. (VITL) and other entities in order to update the health information technology plan pursuant to this section, including applicable standards, protocols, and pilot programs, and may enter into a contract or grant agreement with VITL or other entities to update some or all of the plan. Upon approval by the secretary, the updated plan shall be distributed to the commission on health care reform; the commissioner of information and innovation; the commissioner of banking, insurance, securities, and health care administration; the director of the office of Vermont health access; the secretary of human services; the commissioner of health; the commissioner of mental health; the commissioner of disabilities, aging, and independent living; the senate committee on health and welfare; the house committee on health care; affected parties; and interested stakeholders.

(d) The health information technology plan shall serve as the framework within which the commissioner of banking, insurance, securities, and health care administration

reviews certificate of need applications for information technology under section 9440b of this title. In addition, the commissioner of information and innovation shall use the health information technology plan as the basis for independent review of state information technology procurements.

(e) The privacy standards and protocols developed in the statewide health information technology plan shall be no less stringent than applicable federal and state guidelines, including the “Standards for Privacy of Individually Identifiable Health Information” established under the Health Insurance Portability and Accountability Act of 1996 and contained in 45 C.F.R., Parts 160 and 164, and any subsequent amendments, and the privacy provisions established under Subtitle D of Title XIII of Division A of the American Recovery and Reinvestment Act of 2009, Public Law 111-5, sections 13400 et seq. The standards and protocols shall require that access to individually identifiable health information is secure and traceable by an electronic audit trail.

(f) Qualified applicants may seek grants to invest in the infrastructure necessary to allow for and promote the electronic exchange and use of health information from federal agencies, including the Office of the National Coordinator for Health Information Technology, the Health Resources and Services Administration, the Agency for Healthcare Research and Quality, the Centers for Medicare and Medicaid Services, the Centers for Disease Control and Prevention, the U.S. Department of Agriculture, and the Federal Communications Commission. The secretary of administration or designee shall require applicants for grants authorized pursuant to Section 13301 of Title XXX of Division A of the American Recovery and Reinvestment Act of 2009, Public Law 111-5, to submit the application for state review pursuant to the process established in federal Executive Order 12372, Intergovernmental Review of Federal Programs. Grant applications shall be consistent with the goals outlined in the strategic plan developed by the Office of the National Coordinator for Health Information Technology and the statewide health information technology plan.

§ 9352. VERMONT INFORMATION TECHNOLOGY LEADERS

(a) Governance. The general assembly and the governor shall each appoint one representative to the Vermont Information Technology Leaders, Inc. (VITL) board of directors.

(b) Conflict of interest. In carrying out their responsibilities under this section, directors of VITL shall be subject to conflict of interest policies established by the secretary of administration to ensure that deliberations and decisions are fair and equitable.

(c) Health information exchange operation. VITL shall be designated in the health information technology plan pursuant to section 9351 of this title to operate the exclusive statewide health information exchange network for this state. Nothing in this chapter shall impede local community providers from the exchange of electronic medical data.

(d) Privacy. The standards and protocols implemented by VITL shall be consistent with those adopted by the statewide health information technology plan pursuant to subsection 9351(e) of this title.

(e) Report. No later than January 15 of each year, VITL shall file a report with the commission on health care reform; the secretary of administration; the commissioner of information and innovation; the commissioner of banking, insurance, securities, and health care administration; the director of the office of Vermont health access; the secretary of human services; the commissioner of health; the commissioner of mental health; the commissioner of disabilities, aging, and independent living; the senate committee on health and welfare; and the house committee on health care. The report shall include an assessment of progress in implementing health information technology in Vermont and recommendations for additional funding and legislation required. In addition, VITL shall publish minutes of VITL meetings and any other relevant information on a public website.

(f) Funding authorization. VITL is authorized to seek matching funds to assist with carrying out the purposes of this section. In addition, it may accept any and all donations, gifts, and grants of money, equipment, supplies, materials, and services from the federal or any local government, or any agency thereof, and from any person, firm, foundation,

or corporation for any of its purposes and functions under this section and may receive and use the same, subject to the terms, conditions, and regulations governing such donations, gifts, and grants.

(g) Waivers. The secretary of administration or designee, in consultation with VITL, may seek any waivers of federal law, of rule, or of regulation that might assist with implementation of this section.

(h) Loan and grant programs. VITL shall solicit recommendations from the secretary of administration or designee, health insurers, the Vermont Association of Hospitals & Health Systems, Inc., the Vermont Medical Society, Bi-State Primary Care Association, the Council of Developmental and Mental Health Services, the Behavioral Health Network, the Vermont Health Care Association, the Vermont Assembly of Home Health Agencies, other health professional associations, and appropriate departments and agencies of state government, in establishing a financing program, including loans and grants, to provide electronic health records systems to providers, with priority given to Blueprint communities and primary care practices serving low income Vermonters. Health information technology systems acquired under a grant or loan authorized by this section shall comply with data standards for interoperability adopted by VITL and the state health information technology plan. An implementation plan for this loan and grant program shall be incorporated into the state health information technology plan.

(i) Certification of meaningful use. To the extent necessary or required by federal law, VITL shall be authorized to certify the meaningful use of health information technology and electronic health records by health care providers licensed in Vermont.

(j) Scope of activities. VITL and any person who serves as a member, director, officer, or employee of VITL with or without compensation shall not be considered a health care provider as defined in subdivision 9432(8) of this title for purposes of any action taken in good faith pursuant to or in reliance upon provisions of this section relating to VITL's:

(1) Governance;

(2) Electronic exchange of health information and operation of the statewide health information exchange network as long as nothing in such exchange or operation constitutes the practice of medicine pursuant to chapter 23 or 33 of Title 26;

- (3) Implementation of privacy provisions;
- (4) Funding authority;
- (5) Application for waivers of federal law;
- (6) Establishment and operation of a financing program providing electronic health records systems to providers; or
- (7) Certification of health care providers' meaningful use of health information technology.

Sec. 2. 3 V.S.A. § 2222a(c) is amended to read:

(c) Vermont's health care system reform initiatives include:

* * *

(2) The Vermont health information technology project pursuant to ~~section 903 of Title 22~~ chapter 219 of Title 18.

Sec. 3. 18 V.S.A. § 9410(h)(3)(C) is amended to read:

(C) Consistent with the dictates of HIPAA, and subject to such terms and conditions as the commissioner may prescribe by regulation, ~~the Vermont information technology leaders (VITL) shall have access to the database for use in the development of a statewide health information technology plan pursuant to section 903 of Title 22, and~~ the Vermont program for quality in health care shall have access to the unified health care database for use in improving the quality of health care services in Vermont. In using the database, the Vermont program for quality in health care shall agree to abide by the rules and procedures established by the commissioner for access to the data. The commissioner's rules may limit access to the database to limited-use sets of data as necessary to carry out the purposes of this section.

Sec. 4. 18 V.S.A. § 9416 is amended to read:

§ 9416. VERMONT PROGRAM FOR QUALITY IN HEALTH CARE

(a) The commissioner shall contract with the Vermont Program for Quality in Health Care, Inc. to implement and maintain a statewide quality assurance system to evaluate and improve the quality of health care services rendered by health care providers of

health care facilities, including managed care organizations, to determine that health care services rendered were professionally indicated or were performed in compliance with the applicable standard of care, and that the cost of health care rendered was considered reasonable by the providers of professional health services in that area. The commissioner shall ensure that the information technology components of the quality assurance system are incorporated into and comply with the statewide health information technology plan developed under section ~~903 of Title 22~~ 9351 of this title and any other information technology initiatives coordinated by the secretary of administration pursuant to section 2222a of Title 3.

* * *

Sec. 5. 18 V.S.A. § 9437 is amended to read:

§ 9437. CRITERIA

A certificate of need shall be granted if the applicant demonstrates and the commissioner finds that:

* * *

(7) if the application is for the purchase or lease of new health care information technology, it conforms with the health information technology plan established under ~~section 903 of Title 22, upon approval of the plan by the general assembly~~ section 9351 of this title.

Sec. 6. 18 V.S.A. § 9440b is amended to read:

§ 9440b. INFORMATION TECHNOLOGY; REVIEW PROCEDURES

Notwithstanding the procedures in section 9440 of this title, upon approval by the general assembly of the health information technology plan developed under section ~~903 of Title 22~~ 9351 of this title, the commissioner shall establish by rule standards and expedited procedures for reviewing applications for the purchase or lease of health care information technology that otherwise would be subject to review under this subchapter. Such applications may not be granted or approved unless they are consistent with the health information technology plan and the health resource allocation plan. The commissioner's rules may include a provision requiring that applications be reviewed by the health information advisory group authorized under section ~~903 of Title 22~~ 9352 of

this title. The advisory group shall make written findings and a recommendation to the commissioner in favor of or against each application.

Sec. 7. REPEAL

22 V.S.A. § 903 (health information technology) is repealed.

Sec. 8. HEALTH INFORMATION TECHNOLOGY PLANNING AND IMPLEMENTATION GRANTS

(a) The secretary of administration or designee shall apply to the Secretary of Health and Human Services for an implementation grant to facilitate and expand the electronic movement and use of health information among organizations according to nationally recognized standards and implementation specifications. As part of the grant application, the secretary or designee shall submit a plan, which may include some or all of the elements of the plan administered by the secretary or designee pursuant to section 9351 of Title 18, and which shall:

(1) Be pursued in the public interest;

(2) Be consistent with the strategic plan developed by the National Coordinator of Health Information Technology;

(3) Include a description of the ways in which the state will carry out the activities described in the application for the planning grant under subsection (c) of this section; and

(4) Contain such elements as the Secretary of Health and Human Services may require.

(b) Funds received pursuant to an implementation grant under subsection (a) of this section shall be used to conduct activities, including:

(1) Enhancing broad and varied participation in the authorized and secure nationwide electronic use and exchange of health information;

(2) Identifying state or local resources available toward a nationwide effort to promote health information technology;

(3) Complementing other federal grants, programs, and efforts toward the promotion of health information technology;

- (4) Providing technical assistance for the development and dissemination of solutions to barriers to the exchange of electronic health information;
- (5) Promoting effective strategies to adopt and utilize health information technology in medically underserved areas;
- (6) Assisting patients in utilizing health information technology;
- (7) Providing education and technical assistance in the use of health information technology to clinicians and key practice support staff and encouraging clinicians to work with federally designated Health Information Technology Regional Extension Centers, to the extent that they are available and valuable;
- (8) Supporting public health and human service agencies' authorized use of and access to electronic health information;
- (9) Promoting the use of electronic health records for quality improvement, including through quality measures reporting; and
- (10) Such other activities as the Secretary of Health and Human Services or the National Coordinator of Health Information Technology may specify.
- (c) The secretary of administration or designee shall apply to the Secretary of Health and Human Services, through the Office of the National Coordinator for Health Information Technology, for a grant to plan the activities described in subsection (b) of this section.
- (d) In carrying out the activities funded by the planning and implementation grants, the state shall consult with and consider the recommendations of:
 - (1) Health care and human service providers, including those who provide services to low income and underserved populations;
 - (2) Health insurers;
 - (3) Patient or consumer organizations that represent the population to be served;
 - (4) Health information technology vendors;
 - (5) Health care purchasers and employers;
 - (6) All relevant state agencies, including the department of banking, insurance, securities, and health care administration; the department of information and innovation; and the agency of human services;
 - (7) Health profession schools, universities, and colleges;

- (8) Clinical researchers;
- (9) Other users of health information technology, such as health care providers' support and clerical staff and others involved in patient care and care coordination; and
- (10) Such other entities as the Secretary of Health and Human Services determines appropriate.
- (e) The secretary of administration or designee shall agree, as part of the grant application, to make available from the health IT-fund established under section 10301 of Title 32 nonfederal contributions, including in-kind contributions if appropriate, toward the costs of the implementation grant in an amount equal to:
- (1) For fiscal year 2011, not less than \$1.00 for each \$10.00 of federal funds provided under the grant;
- (2) For fiscal year 2012, not less than \$1.00 for each \$7.00 of federal funds provided under the grant;
- (3) For fiscal year 2013 and each subsequent fiscal year, not less than \$1.00 for each \$3.00 of federal funds provided under the grant; and
- (4) Before fiscal year 2011, such amounts, if any, as the Secretary of Human Services may determine to be required for receipt of federal funds under the grant.

Sec. 9. 32 V.S.A. § 10301 is amended to read:

§ 10301. HEALTH IT-FUND

(a) The Vermont health IT-fund is established in the state treasury as a special fund to be a source of funding for medical health care information technology programs and initiatives such as those outlined in the Vermont health information technology plan administered by the ~~Vermont Information Technology Leaders (VITL)~~ secretary of administration or designee. One hundred percent of the fund shall be disbursed for the advancement of health information technology adoption and utilization in Vermont as appropriated by the general assembly, less any disbursements relating to the administration of the fund. The fund shall be used for loans and grants to health care providers pursuant to section 10302 of this chapter and for the development of programs and initiatives sponsored by VITL and state entities designed to promote and improve health care information technology, including:

(1) a program to provide electronic health information systems and practice management systems for primary health care and human service practitioners in Vermont;

(2) financial support for VITL to build and operate the health information exchange network;

(3) implementation of the Blueprint for Health information technology initiatives, related public and mental health initiatives, and the advanced medical home and community care team project; and

(4) consulting services for installation, integration, and clinical process re-engineering relating to the utilization of healthcare information technology such as electronic ~~medical~~ health records.

* * *

Sec. 10. 32 V.S.A. § 10302 is added to read:

§ 10302. CERTIFIED ELECTRONIC HEALTH RECORD TECHNOLOGY

LOAN FUND

(a) Subject to the requirements set forth in subsection (d) of this section, the secretary of administration or designee shall establish a certified electronic health record technology loan fund (“loan fund”) within the health IT-fund for the purpose of receiving and disbursing funds from the Office of the National Coordinator of Health Information Technology for the loan program described in subsection (b) of this subsection.

(b) The secretary of administration or designee may apply to the Office of the National Coordinator of Health Information Technology for a grant to establish a loan program for health care providers to:

(1) facilitate the purchase of electronic health record technology;

(2) enhance the utilization of certified electronic health record technology, including costs associated with upgrading health information technology so that it meets criteria necessary to be a certified electronic health record technology;

(3) train personnel in the use of electronic health record technology; or

(4) improve the secure electronic exchange of health information.

(c) In addition to the application required by the National Coordinator, the secretary or designee shall also submit to the National Coordinator a strategic plan identifying the

intended uses of the amounts available in the loan fund for a period of one year, including:

- (1) a list of the projects to be assisted through the loan fund during such year;
- (2) a description of the criteria and methods established for the distribution of funds from the loan fund during the year;
- (3) a description of the financial status of the loan fund as of the date of the submission of the plan; and
- (4) the short-term and long-term goals of the loan fund.

(d) Amounts deposited in the loan fund, including loan repayments and interest earned on such amounts, shall be used only as follows:

- (1) to award loans that comply with the following:
 - (A) the interest rate for each loan shall not exceed the market interest rate;
 - (B) the principal and interest payments on each loan shall commence no later than one year after the date the loan was awarded, and each loan shall be fully amortized no later than 10 years after the date of the loan; and
 - (C) the loan fund shall be credited with all payments of principal and interest on each loan awarded from the loan fund;
 - (2) to guarantee, or purchase insurance for, a local obligation, all of the proceeds of which finance a project eligible for assistance under this subsection, if the guarantee or purchase would improve credit market access or reduce the interest rate applicable to the obligation involved;
 - (3) as a source of revenue or security for the payment of principal and interest on revenue or general obligation bonds issued by the state if the proceeds of the sale of the bonds will be deposited into the loan fund;
 - (4) to earn interest on the amounts deposited into the loan fund; and
 - (5) to make reimbursements described in subdivision (f)(1) of this section.
- (e) The secretary of administration or designee may use annually no more than four percent of the grant funds to pay the reasonable costs of administering the loan programs pursuant to this section, including recovery of reasonable costs expended to establish the loan fund.

(f)(1) The loan fund may accept contributions from private sector entities, except that such entities may not specify the recipient or recipients of any loan issued under this subsection. The secretary or designee may agree to reimburse a private sector entity for any contribution to loan fund, provided that the amount of the reimbursement may not exceed the principal amount of the contribution made.

(2) The secretary or designee shall make publicly available the identity of, and amount contributed by, any private sector entity and may issue to the entity letters of commendation or make other awards, provided such awards are of no financial value.

(g) The secretary of administration or designee shall agree, as part of the grant application, to make available from the health IT-fund established under section 10301 of Title 32 nonfederal cash contributions, including donations from public or private entities, toward the costs of the loan program in an amount equal to at least \$1.00 for every \$5.00 of federal funds provided under the grant.

Sec. 11. LOANS TO DEVELOP CERTIFIED ELECTRONIC HEALTH RECORD PROGRAMS

The secretary of administration or designee may contract with the Vermont Information Technology Leaders, Inc. or another entity to develop and administer a program making available to health care providers in this state low- or no-interest loans to pay the provider's up-front costs for implementing certified electronic health record programs, which loans shall be repaid upon the provider's receipt of federal Medicare or Medicaid incentive payments for adoption and meaningful use of certified electronic health record technology.

Sec. 12. INFORMATION TECHNOLOGY PROFESSIONALS IN HEALTH CARE GRANTS

The secretary of administration or designee shall convene a group of stakeholders representing the institutions of higher education in this state to evaluate federal grant opportunities available to establish or expand medical health informatics education programs for health care and information technology students to ensure the rapid and effective utilization of health information technologies. No later than November 15,

2009, the secretary or designee shall report to the commission on health care reform regarding the group's recommendations for maximizing the flow of federal funds into the state related to establishing or expanding medical health informatics education programs and its timeline for the anticipated activities of each institution of higher education relative to securing the federal funds.

Sec. 13. AUTHORIZATION TO SEEK FEDERAL FUNDS

The secretary of human services or designee may apply to the Secretary of Health and Human Services or other applicable agency for federal funds to enable Vermont to pursue its goals with respect to modernization and upgrades of information technology and health information technology systems, coordination of health information exchange, public health and other human service prevention and wellness programs, and the Blueprint for Health.

Appendix B:

Privacy and Security

Application of Law to the Privacy and Security Framework of a Health Information Exchange Network

This Appendix to the Vermont *Health Information Technology Plan* is intended to incorporate recent developments in state and national privacy and security policies and procedures consistent with Joint Resolution No. 348 of the 2007-2008 Legislature which approved the Plan.

In December, 2008, the United States Department of Health and Human Services (“HHS”) through its Office of Civil Rights (“OCR”) published guidance documents to implement the Nationwide Privacy and Security Framework for Electronic Exchange of Individually Identifiable Health Information (“Privacy and Security Framework”) to illustrate how the HIPAA Privacy Rule would apply to electronic health information exchange between health care providers who are Covered Entities under the HIPAA Privacy Rules. The following discussion summarizes the six principles set forth in the guidance documents, and summarizes the other applicable federal and state law provisions which govern the application of these principles to electronic health information exchange, including the privacy and security provisions included in the Health Information Technology for Economic and Clinical Health (“HITECH”) Act of 2009.

Compliance with these six principles and the relevant law provisions should be considered in the review of any proposals to create electronic health information exchange infrastructure. Operational policies for the Vermont Health Information Exchange Network, consistent with these principles and the relevant law provisions have been developed and will be regularly revised to address specific issues and concerns identified as the Network is established and gains experience. (Current versions of these Policies are included following this discussion.)

PRIVACY AND SECURITY FRAMEWORK - OPENNESS AND

TRANSPARENCY PRINCIPLE: There should be openness and transparency about policies, procedures, and technologies that directly affect individuals and/or their individually identifiable health information.

Description: The Openness and Transparency Principle emphasizes the concept that trust in electronic health information exchange can best be established in an open and transparent environment. Health Care Providers participating in a Health Information Exchange should provide clear notice of their policies and procedures in order that individuals understand what individually identifiable health information exists about them, how that information is collected, used, and disclosed, and how reasonable choices can be exercised with respect to that information. The Office for Civil Rights indicates that the Notice of Privacy Practices of a Health Care Provider can help facilitate the

openness and transparency in electronic health information exchange that is important for building trust. Individual Health Care Providers can tailor their Notice of Privacy Practices to describe the role of a Health Information Exchange Network.

Applicable federal law: HIPAA's Privacy Rule 45 CFR § 164.520 provides individuals with a right to receive a notice of privacy practices "in plain language", which, among other things, describes how a health care provider may use and disclose their protected health information, the individuals' rights with respect to that information, as well as the provider's obligations to protect the confidentiality of that information. Under the HIPAA Privacy Rule, a health information exchange does not itself have an obligation to provide a notice of privacy practices to individuals. The HIPAA Privacy Rule permits, however, health care providers to give notice to individuals of the disclosures that will be made to and through the health information exchange, as well as how individuals' health information will be protected in a networked environment. Also, where electronic health records are maintained and exchanged, the HITECH Act enhances an individual's right to obtain an accounting of disclosures of electronic protected health information by a covered entity for the purposes of treatment, payment and health care operations. See § 13405(c).

A Health Care Provider participating in the Health Information Exchange who must comply with the federal regulations on confidentiality of alcohol and drug abuse treatment patient records must comply with the patient notice provisions of 42 CFR § 2.22. In devising its notice to patients, the Health Care Provider should consider adding to the written summary that must be provided to patients a description of its participation in the Health Information Exchange.

Applicable state law: Under Vermont law, individuals are implied to have a full right of access to their protected health information in that a failure of a licensed health care provider to make PHI available upon the patient's written request is grounds for discipline under the health care providers licensure laws. See 26 VSA § 1354(a)(10) and 3 VSA § 129a(a)(8). The Hospital Bill of Rights, 18 VSA §§ 1853(3),(4) and (9), requires that a patient has the right to obtain from the physician coordinating his or her care, complete and current information concerning the diagnosis, treatment and any known prognosis in terms the patient can reasonably be expected to understand. The patient has the right to receive information necessary to give informed consent for any procedure or treatment and the right to know the identity and professional status of individuals providing services. The Nursing Home Residents Bill of Rights, 33 VSA § 7301(c), also requires that a resident be fully informed of his or her medical condition and given an opportunity to participate in the planning of medical treatment. Although neither statute requires patient notice regarding the electronic exchange of protected health care information, the provision of such notice is within the spirit of each law. Additionally, both statutes require hospital patient or nursing home resident consent for the disclosure of such information outside of those individuals involved with the individual's treatment within the relevant facility. See 18 VSA § 1853(7) and 33 VSA § 7103(H). See also Vermont consent law discussion set forth in Individual Choice Principle below.

PRIVACY AND SECURITY FRAMEWORK - INDIVIDUAL CHOICE

PRINCIPLE: Individuals should be provided a reasonable opportunity and capability to make informed decisions about the collection, use, and disclosure of their individually identifiable health information.

Description: The OCR guidance documents emphasize that an important aspect of building trust in the electronic exchange of protected health information is to provide individuals the opportunity and ability to make choices with respect to their participation in the exchange. Providing certain rights to an individual, such as right to access information, right to receive a Notice of Privacy Practices, right to seek amendment, right to obtain an accounting of certain disclosures, right to consent, agree or object to disclosure and a right to request restrictions on disclosures, empower an individual to manage his or her protected health information. Health Information Exchange Networks can further facilitate an individual's management of the portability of his or her protected health information. Without considering state or other federal law ramifications, the guidance documents describe that the HIPAA's Privacy Rule gives health care providers flexibility with regard to the decision of whether to obtain an individual's consent in order to use or disclose PHI for treatment, payment, and health care operations purposes, and with regard to the content of the consent and the manner of obtaining it. Health care providers may obtain patient consent before disclosing any protected health information through a health information exchange, or they may obtain consent that limits disclosures on a more selective 'granular' level. Examples of the latter are obtaining consent for disclosures for certain purposes, to certain categories of recipients, or for certain types of information.

Patients may seek to restrict access to their protected health information if it will be available in a health information exchange. The Office of Civil Rights suggests that health care providers which participate in a health information exchange may want to consider their policies with respect to the right to request restrictions, and how they might respond to such requests in a manner that recognizes the importance of individual choice in building trust in such exchanges.

Applicable federal law: The HIPAA Privacy Rule provides an individual with the right to access their protected health information, 45 CFR § 164.524 as amended by HITECH Act § 13405(e), the right to seek amendments to it, 45 CFR § 164.526, the right to receive an accounting of certain disclosures, 45 CFR § 164.528 as amended by HITECH Act § 13405(c), the right to receive a Notice of Privacy Practices, 45 CFR § 164.520, and the right to agree or object to certain disclosures, 45 CFR § 164.510. The HIPAA Privacy Rule allows each covered entity to tailor their consent policies and procedures, if any, according to what works best for their organization and the individuals with whom they interact. See 45 CFR § 164.506(b). The HIPAA Privacy Rule, 45 CFR § 164.522, also provides individuals with a right to request that a health care provider restrict uses or disclosures of protected health information about the individual for treatment, payment, or health care operations purposes. With one exception, health care providers are not required to agree to an individual's request for a restriction, but they are required to have policies in place by which to accept or deny such requests. When the HITECH Act

becomes effective, requests to restrict access by a health plan to protected health information regarding a service or item for which the individual has fully paid out of pocket must be agreed to. See HITECH Act, § 13405(a).

Under 42 CFR Part 2, a Health Care Provider must have patient consent to make disclosures and re-disclosures of protected health information related to covered services for alcohol or drug abuse treatment or to disclose the identity of an individual receiving such services, 42 CFR § 2.13, § 2.32 and § 2.33. Any such consent must meet written requirements as set forth in 42 CFR § 2.31. These regulations require patients be given a Notice of Confidentiality Requirements, 42 CFR § 2.22.

Applicable state law: Vermont law is stricter than the HIPAA Privacy Rule in that it requires individual consent for a health care provider to make disclosures of information gathered and maintained for the purpose of the health care provider's treatment of the patient. The patient privilege statute, 12 VSA § 1612, prohibits physicians, chiropractors, dentists, nurses, mental health providers (and by implication the organizations who maintain their records) from disclosing protected health information without the patient's consent ("waiver") or an express requirement of law. The Hospital Patient Bill of Rights, 18 VSA § 1852(7), and the Nursing Home Resident Bill of Rights, 18 VSA § 1852(7), also require individual patient or resident consent prior to the disclosure of protected health information beyond those providing care at the relevant facility. Under the mental health care provisions, 18 VSA § 7103(a), no disclosure may be made of the protected health information relating to an individual or to the individual's identity without the individual's written consent. Similarly, no protected health information which includes the results of genetic testing or the fact that an individual has been tested shall be disclosed without the written consent of the individual, 18 VSA § 9332(e). Drug test results subject to Vermont's drug testing law set forth in 21 VSA § 516(a) and (b) may not be disclosed except as provided in the statute or with the written consent of the individual.

PRIVACY AND SECURITY FRAMEWORK - COLLECTION, USE, AND DISCLOSURE LIMITATION PRINCIPLE: Individually identifiable health information should be collected, used, and/or disclosed only to the extent necessary to accomplish a specified purpose(s) and never to discriminate inappropriately.

Description: The OCR guidance documents emphasize that appropriate limits should be set on the type and amount of information collected, used and disclosed for any purpose. The Privacy Rule requires health care providers to take reasonable steps to limit the disclosure of or any requests for protected health information to the minimum necessary, when requesting such information from other providers for purposes other than for treatment. The Office for Civil Rights considers that many of the requests or disclosures to or through a health information exchange may not be subject to the Privacy Rule's minimum necessary standard because they are made for the purpose of treatment. However, providers engaging in electronic health information exchange are free to apply minimum necessary concepts to develop policies that limit the information they include and exchange, even for treatment purposes. Business Associate Agreements between

Health Care Providers and any organization facilitating health information exchange must limit uses and disclosures to be consistent with any such policies. The Office for Civil Rights suggests for routine exchanges of information for treatment purposes, health care providers and the health information exchange can come up with a standard set of information that should be included in an exchange and that would be considered minimally necessary for the purpose. Doing so would be consistent with the Collection, Use, and Disclosure Limitation Principle, and may help foster increased trust in electronic health information exchange.

In an electronic health information exchange environment, the Office for Civil Rights expects that exchange use likely will be limited to only certain discrete purposes, such as for primarily treatment purposes, and that a health care provider's disclosures of protected health information for a public policy related purpose through a health information exchange is unlikely. As a result, many of the purposes for which the HIPAA Privacy Rule permits a health care provider to disclose protected health information, without patient authorization, such as to report suspected child abuse, by their nature may not lend themselves to an electronic health information exchange environment. The use of de-identified information for research is permitted and may be facilitated in a health information exchange environment.

Applicable federal law: The HIPAA Privacy Rule 45 CFR § 164.502(b) requires health care providers to take reasonable steps to limit the use or disclosure of protected health information to the minimum necessary to accomplish the intended purpose unless the disclosure is for treatment purposes. The HITECH Act requires that the minimum amount necessary for non-treatment purposes be restricted to limited data set information as defined in 45 CFR § 164.514(e)(2) unless otherwise justified by a specific need, until such time as the Secretary of the U.S. Department of Health and Human Services issues a guidance. See § 13405(b). The HIPAA Privacy Rule, in 45 CFR § 164.512, permits uses and disclosures of protected health information for a number of public policy and benefit purposes, such as research or public health, without the individual's authorization. However, specific conditions or limitations apply to uses and disclosures by a health care provider for these purposes, in order to strike an appropriate balance between the individual's privacy interests and the public interest need for this information. The HITECH Act, § 13405(c), also will allow an individual whose protected health information is part of an electronic health record to obtain an accounting of all disclosures for up to a three year time period by a covered entity for the purposes of treatment, payment and health care operations in addition to other purposes covered in the HIPAA Privacy Rule, 45 CFR § 164.528.

Under 42 CFR Part 2, individual patient consent must be obtained in order for a health care provider to disclose protected health information regarding alcohol or drug abuse treatment covered under those regulations, unless the individual is experiencing a medical emergency, 42 CFR § 2.51, the information is subject to a research protocol meeting the requirements of 42 CFR § 2.52, or other limited exceptions relating to reporting crimes on the premises, child abuse, government audits or court orders apply. See 42 CFR §.2.12.

Applicable state law: Under Vermont law, the scope of disclosure of protected health information will be governed by the scope of the patient consent permitting such disclosure, since patient consent, as described in the discussion of the Individual Choice Principle above, is largely required for any disclosure of protected health information beyond the treating health care provider. However, there are also a number of disclosures which Vermont law requires a health care provider to make without patient consent. These include, among others, disclosure of treatment of firearm wounds, 13 VSA § 4012, certain instances of cancer or communicable disease, 18 VSA § 151-157, § 1001-1007, § 1041 and § 1093, child and vulnerable adult abuse, 33 VSA § 4913 and § 6903, lead poisoning of children under age 6, 18 VSA § 1755(d) and immunizations 18 VSA § 1129. Nothing in Vermont law would prohibit these required disclosures from being made electronically through an exchange, if the health care provider and the exchange agreed to do so.

PRIVACY AND SECURITY FRAMEWORK - CORRECTION

PRINCIPLE: Individuals should be provided with a timely means to dispute the accuracy or integrity of their individually identifiable health information, and to have erroneous information corrected or to have a dispute documented if their requests are denied.

Description: Individuals have a critical stake in the accuracy of their individually identifiable health information and play an important role in ensuring the integrity of that data. The Office for Civil Rights notes that health information exchanges can be very useful in facilitating the amendment process and disseminating amended information.

Applicable federal law: Under HIPAA's Privacy Rule 45 CFR § 164.526(c), individuals have the right to have a health care provider amend their protected health information. The provider must act in a timely manner, usually within a maximum of 60 days, to correct the record as requested by the individual or to notify the individual that the request is denied. When a correction is made, the provider must make reasonable efforts to see that the corrected information is made available to other providers and entities such as health information exchanges. A provider may deny a requested amendment if it determines that the information is accurate and complete, and on limited other grounds. When a request is denied, but the individual continues to dispute the accuracy of the information, the individual must be provided an opportunity to file a statement of disagreement with the provider. The provider must include documentation of the dispute with any subsequent disclosure of the disputed protected health information.

Applicable state law: None.

PRIVACY AND SECURITY FRAMEWORK - SAFEGUARDS

PRINCIPLE: Individually identifiable health information should be protected with reasonable administrative, technical, and physical safeguards to ensure its confidentiality, integrity, and availability and to prevent unauthorized or inappropriate access, use, or disclosure.

Description: Administrative, technical and physical safeguards include such actions and practices as securing locations and equipment; implementing technical solutions to mitigate risks; and workforce training. Safeguards are generally described in order to be “scalable” to allow entities of different sizes, functions, and needs to adequately protect the privacy of protected health information as appropriate to their circumstances. Because each provider chooses the safeguards that best meet its individual needs, the types of protections applied may not be the same across all participants in a health information exchange. Even so, the Office for Civil Rights suggests that the actual exchange of information may be facilitated and even enhanced if all participants adopt and adhere to the same or consistent safeguard policies and procedures. To that end, the flexibility of the Privacy Rule would allow providers and the health information exchange to agree on appropriate, common safeguards.

Health information exchange participants may agree to use a common set of procedures and mechanisms to verify the credentials of and to authenticate persons requesting and accessing information through an exchange network or to apply the same standard training for persons who utilize the network. Common safeguards policies may include enforcement mechanisms and penalties for breaches and violations. A health information exchange also may establish and centrally control the exchange network, network equipment, and exchange conduits, so that the exchange process itself is protected by a single set of safeguards and security mechanisms.

Applicable federal law: The HIPAA Privacy Rule, 45 CFR § 164.530(c), requires health care providers to reasonably safeguard protected health information from any intentional or unintentional use or disclosure in violation of the Privacy Rule. The Privacy Rule’s safeguards standard is flexible and does not prescribe any specific practices or actions that must be taken by health care providers.

The HIPAA Security Rule, 45 CFR §§ 164.302 et seq., provides further elaboration on the nature of administrative, physical and technical safeguards required of any Health Care Provider who maintains electronic protected health information. These provisions are “scalable” to apply to health care providers of very different sizes and complexity. See §§ 164.308, 164.310 and 164.312. The HITECH Act extends the HIPAA Security Rule requirements and related enforcement provisions to Business Associates and requires any health information exchange organization to have business associate agreements with participating covered entities. See § 13401(a) and § 13408.

Consistent with the above, Health Care Providers who must comply with the federal regulations governing the confidentiality of alcohol and drug abuse patient records must comply with the security provisions of 42 CFR § 2.16 requiring secure premises and written procedures regulating access to and use of written records.

Applicable state law: Vermont’s Health Information Technology law provides that any standards and protocols developed by VITL require that protected health information be secure and traceable by an electronic audit trail, 18 VSA § 9351(e), (formerly 22 VSA § 903(f)).

PRIVACY AND SECURITY FRAMEWORK - ACCOUNTABILITY

PRINCIPLE: The Principles in the Privacy and Security Framework should be implemented, and adherence assured, through appropriate monitoring and other means and methods should be in place to report and mitigate non-adherence and breaches.

Description: The Privacy Rule gives health care providers considerable flexibility to develop and implement policies and procedures which are appropriate and scalable to their own environment. This flexibility allows providers that will be engaging in electronic health information exchange to consider how best to comply with the Privacy Rule's administrative standards.

The Office for Civil Rights notes that health care providers either will need to write new privacy policies and procedures or adapt their existing policies and procedures to address the changes in their business practices needed to accommodate electronic exchanges of protected health information. Workforce members, whose functions involve the electronic exchange of protected health information, including those workforce members responsible for monitoring and overseeing the entity's participation in an electronic health information exchange, should receive training on these new or changed policies and procedures. A health care provider participating in a health information exchange also should review and amend as necessary its policies and procedures for sanctioning workforce members who fail to comply with the entity's privacy policies and procedures or the requirements of the HIPAA Privacy Rule. The entity's sanction policies may likewise need to address changes in responsibility for accessing, using, and disclosing protected health information, the types of noncompliance that may arise in an electronic environment, and the appropriate sanctions for such noncompliance.

Mitigation is required, where practicable, for known harmful effects caused by the health care provider's own workforce misusing or disclosing electronic protected health information or by such misuse or wrongful disclosure by a health information exchange that is a business associate. Mitigation steps may include: identifying the cause and amending procedures to ensure it does not happen again; taking steps to limit further distribution of improperly disclosed information; and notifying the individual of the violation.

Health information exchange networks must have accountability provisions written into their business associate agreements with health care providers to ensure that they operate in compliance with the federal and state requirements governing a health care provider's obligations with regard to electronic protected health information.

Applicable federal law: The HIPAA Privacy Rule, 45 CFR § 164.530, provides the foundation for accountability within an electronic health information exchange environment by requiring health care providers that exchange protected health information to comply with its administrative requirements (including workforce training and discipline, a complaint process and mitigation) and to extend such obligations to their business associates, 45 CFR §§ 164.314(a), 164.502(e) and 164.504(e). The HIPAA Security Rule also reinforces the need for a health care provider to have policies and

procedures to prevent, detect, contain, correct or mitigate any security violation and to have response plans ready, 45 CFR § 164.308. The HITECH Act §§ 13401 and 13404 specifically require Business Associate to meet HIPAA Privacy and Security Regulations to protect PHI. The HIPAA Privacy Rule also promotes accountability by establishing mechanisms for addressing non-compliance with HIPAA privacy standards through the Office of Civil Rights procedures which promote voluntary mitigation, resolution and corrective action plans in the event of non-compliance. The Secretary of the US Department of Health and Human Services also has the authority to impose civil monetary penalties as set forth in 45 CFR § 160.404 as amended by HITECH Act § 13410 and which extends enforcement to State Attorneys General.

The HITECH Act adds substantial accountability requirements by requiring covered entities to provide notification to affected individuals where there has been a security breach resulting in the unauthorized acquisition, access, use or disclosure of unsecured protected health information. See § 13402.

Applicable state law: Vermont's Health Information Technology law provides that any standards and protocols developed by VITL require that protected health information be secure and traceable by an electronic audit trail, 18 VSA § 9351(e), (formerly 22 VSA § 903(f)). Vermont's mental health information provisions, 18 VSA § 7103(c), provides that any person violating its prohibitions against releasing protected health information relating to mental health services without consent, may be fined not more than \$2,000 or imprisoned for not more than one year, or both. Outside of this specific provision, accountability for maintaining the confidentiality of protected health information under Vermont law largely falls under the State's licensure provisions for specific types of health care providers and facilities and not as a private right of action under state law. In the event that an individual has a complaint relating to the use or disclosure of his or her protected health information, a professional grievance against the health care provider or facility responsible may be submitted for review by the licensing authority.

The following Policies were last updated, reviewed, and approved by the VITL Board of Directors on September 24, 2009. The Policy on Secondary Use of Identifiable PHI on the VHIE is shown with proposed revisions currently out for public comment.

Policy on Participating Health Care Provider Policies and Procedures for the VHIE

Definitions –

“Consent” means an individual’s act of giving permission to a Participating Health Care Provider in the Vermont Health Information Exchange Network (“VHIE” or “Exchange”) to make the individual’s protected health information (“PHI”) available on the Exchange to, or to permit access to it by Participating Health Care Providers who are also involved in the treatment of the individual.

“Health Care Operations” shall mean activities of a Participating Health Care Provider providing treatment to an individual relating to quality assessment and improvement, evaluations relating to the competence of treating providers or necessary administrative and management activities all as defined in the HIPAA Privacy Regulations, 45 CFR §164.501.

A “Participating Health Care Provider” shall mean a health care provider, including any health care organization meeting the definition of a health care facility as defined in 18 VSA § 9402(6), that has executed an effective VHIE Data Services and Participation Agreement with VITL.

“Treatment” shall mean the provision, coordination, or management of health care and related services by one or more health care providers.

Policy –

1. Each Participating Health Care Provider shall, at all times, comply with all applicable federal and state laws and regulations, including, but not limited to those protecting the confidentiality and security of protected health information (“PHI”) and establishing individual privacy rights. Each Participating Health Care Provider shall comply with changes or updates to interpretations of such law and regulations to ensure compliance. Each Participating Health Care Provider shall update its Notice of Privacy Practices to describe its participation in the Exchange when an individual has consented to opt in and make his or her PHI available on the Exchange. Participating Health Care Providers shall be aware of the provisions of certain state laws, for instance, the Vermont patient privilege, 12 VSA §1612, which are more stringent than, and not preempted by, the HIPAA Privacy and Security

Regulations. No Participating Health Care Provider shall permit access to PHI from the VHIEN for purposes other than treatment, payment for treatment or necessary Health Care Operations without patient authorization, a court order or express requirement of law.

2. Each Participating Health Care Provider shall, at all times, comply with all applicable Exchange policies and procedures (“VHIEN Policies”). These VHIEN Policies may be revised and updated from time to time upon reasonable written notice to all Participating Health Care Providers. Each Participating Health Care Provider is responsible for ensuring it has, and is in compliance with, the most recent version of these VHIEN Policies.

3. Each Participating Health Care Provider is responsible for ensuring that it has the requisite, appropriate, and necessary internal policies for compliance with applicable laws and VHIEN Policies, including, without limitation, a sanctions policy. In the event of a conflict between VHIEN Policies and Participating Health Care Provider’s own policies and procedures, the Participating Health Care Provider shall comply with the policy that is more protective of individual privacy and security. Participating Health Care Provider shall enforce its policies and procedures by appropriately sanctioning individuals within its workforce and staff who violate its policies, VHIEN Policies, or federal or state law.

4. Each Participating Health Care Provider shall have policies and procedures to promote the integrity of the PHI it maintains and makes available to the VHIEN and the accuracy, relevance and completeness of such PHI. In the event PHI is amended either at the request of the Individual pursuant to the HIPAA privacy regulations or Vermont law or to otherwise correct inaccuracies, the Participating Health Care Provider making the amendment shall notify the VHIEN and other Participating Health Care Providers who have accessed such PHI of such amendments.

5. Each Participating Health Care Provider shall designate individuals who may access the VHIEN to retrieve PHI for the treatment of patients. With regard to its designated workforce or staff members, the policies of the Participating Health Care Provider shall require that they:

- i. have or receive training regarding the confidentiality of PHI under the HIPAA Privacy and Security Regulation and all other applicable federal and state laws and they are obligated to protect PHI in compliance with such laws and VHIEN Policies;
- ii only access the Exchange for purposes of treatment of an individual or necessary health care operations;

- iii hold any passwords, or other means for accessing the Exchange, in a confidential manner and to release them to no other individual;
 - iv comply with both VHIEN Policies and those of the Participating Health Care Provider and that their workforce and staff members understand that their failure to do so may result in their exclusion from the Exchange and may constitute cause for disciplinary action.
6. Each Participating Health Care Provider shall include in its policies and procedures that an individual shall not be denied treatment on the basis that he or she chooses not to consent to make his or her PHI available to the VHIEN or who refuses to provide consent to the access by a Participating Health Care Provider to PHI made available by the individual to the VHIEN.

Policy on Patient Consent to Opt In to VHIE

Definitions –

“Consent” shall mean an individual’s act of giving permission to a Participating Health Care Provider in the Vermont Health Information Exchange Network (“VHIE” or “Exchange”) to make the individual’s protected health information (“PHI”) available on the Exchange to, or to permit access to it by, Participating Health Care Providers who are also involved in the treatment of the individual.

“De-identified” shall mean that all identifying information related to an individual as set forth in the HIPAA Privacy and Security Rule, 45 CFR § 164.514(b), are removed from the protected health information.

“Health Care Operations” shall mean activities of a Participating Health Care Provider providing treatment to an individual relating to quality assessment and improvement, evaluations relating to the competence of treating providers or necessary administrative and management activities all as defined in the HIPAA Privacy Regulations, 45 CFR §164.501.

A “Participating Health Care Provider” shall mean a health care provider, including any health care organization meeting the definition of a health care facility as defined in 18 VSA § 9402(6), that has executed an effective VHIE Data Services and Participation Agreement with VITL.

“Protected Health Information” (“PHI”) shall mean identifiable personal information in any form or medium about the past, present or future physical or mental health or condition of an individual as defined in the HIPAA Privacy Regulations, 45 CFR §160.103.

“Treatment” shall mean the provision, coordination, or management of health care and related services by one or more health care providers.

Policy –

Consent to Opt In

No protected health information (“PHI”) of any individual shall be made available over the Exchange unless the individual has specifically consented in writing to make his or her PHI available to treating Participating Health Care Providers on the Exchange for the purposes of treatment, payment for treatment and health care operations. VITL shall only make available on the Exchange the PHI of individuals who have a current written consent for such availability on record.

The individual shall be provided educational information from VITL regarding the Exchange and its use by Participating Health Care Providers for treatment purposes. This information shall advise individuals of the ability of Participating Health Care Providers to access their PHI for treatment and also that VITL will provide individuals with the ability to direct access to their PHI to Participating Health Care Providers if they consent to make their PHI available on the Exchange. It also shall advise them that their information can be available to Participating Health Care Providers providing treatment in an emergency and that de-identified information may be used for research, quality improvement and public health purposes. The individual shall be provided a Notice of Privacy Practices by the Participating Health Care Providers, as well.

Consent to access or to make PHI available on the Exchange may be revoked pursuant to the Participating Health Care Provider's Procedures as set forth in its Notice of Privacy Practices. The Participating Health Care Provider will promptly notify VITL in the event that an individual has revoked consent for his or her PHI to be available on the Exchange.

Consent to Opt In Procedure

VITL shall provide educational materials about the Exchange to Participating Health Care Providers, who shall make it available to patients. Participating Health Care Providers shall seek written or digital consent from patients to opt in and participate in the Exchange, and if consent to opt in is obtained, either enter that consent into their electronic health records system, which will then automatically notify the Exchange that the patient has opted in, or send the written consent form to VITL to enter with the Exchange. Participating Health Care Providers who include drug or alcohol treatment programs will specify an expiration date for the consents obtained from their patients. VITL shall establish a mechanism for Participating Health Care Providers to confirm that an individual has consented to opt in and shall facilitate the renewal of consents which have expiration dates.

Form of Consent to Opt In

An individual's consent to opt in to participate in the Exchange (1) shall be in writing, (2) shall be effective indefinitely unless it specifies an expiration date or is revoked and (3) shall include statements substantially similar to the following:

- I give my consent to all Participating Health Care Providers involved in my health care, including mental health, and substance abuse treatment providers, to access and use or disclose my protected health information to the Exchange for my treatment, for payment for my treatment and for health care operations consistent with the federal HIPAA privacy regulations and Vermont law.

- I consent to the disclosure of my protected health information by my Participating Health Care Provider electronically through the Exchange to any health care providers, including mental health and substance abuse treatment providers, for the purpose of my treatment, and I understand that I may direct that my Participating Health Care Providers obtain access to my protected health information on the Exchange.
- My consent includes the re-disclosure of protected health information received from a drug or alcohol treatment program for my treatment.
- I have received information from VITL regarding the Exchange and am aware that the privacy practices of my Participating Health Care Provider are described in its Notice of Privacy Practices.
- I am aware that de-identified information taken from my protected health information may be used for research, quality improvement and public health purposes.
- This consent is subject to my revocation/termination at any time except to the extent it has already been accessed by Participating Health Care Providers, including the inclusion of my information from the Exchange in the records of Participating Health Care Providers who are providing treatment to me.
- My consent is effective indefinitely unless either it relates to PHI from a drug or alcohol treatment program, or I choose to revoke or terminate my consent at an earlier date.
- I understand that I will be notified no less than once every five years of my right to revoke my consent.

Consent may be given in writing by an Individual's legal Representative as authorized by law.

Notification of Individual's Right to Revoke Consent

No less than once every five years, VITL shall notify and remind individuals who have consented to have their PHI accessible over the Exchange of his or her consent and of his or her right to revoke consent.

Individual Access to PHI on Exchange

An individual shall be provided the right of access to his or her PHI available on the Exchange through his or her Participating Health Care Provider or through VITL on behalf of a Participating Health Care Provider where so arranged. Individuals may direct that certain Participating Health Care Providers obtain access to his or her protected health information on the Exchange in addition to any Participating Health Care Providers being able to access the PHI for treatment of that individual.

Access by Treating Participating Health Care Providers Only

All Participating Health Care Providers on the Exchange shall have policies and procedures to ensure that only those involved in the diagnosis or treatment of an individual, payment for that treatment or necessary health care operations may access the individual's PHI on the Exchange. Participating Health Care Providers shall comply with the HITECH Act of 2009 and HIPAA privacy and security rule and all applicable state laws.

Re-disclosure Prohibition Notice

The Exchange shall provide notification to Participating Health Care Providers who access PHI on the Exchange substantially similar to the following statements:

- Information disclosed to you on the Exchange may include PHI received from a drug or alcohol treatment program protected by Federal confidentiality rules, 42 CFR Part 2, which prohibit you from making further disclosure unless it is expressly permitted by a specific written consent from the subject individual or as otherwise permitted by the Rule. The Federal rules restrict use of information protected under 42 CFR Part 2 from criminal investigations or prosecutions of an alcohol or drug abuse patient.

Patient Request for Audit Report

An individual may request an Audit Report of access to his or her PHI on the Exchange by contacting VITL's Privacy Officer. VITL shall provide the requested Audit Report within 10 calendar days.

Revocation

An individual who has signed a written consent to permit his or her PHI to be available on the Exchange for treatment purposes shall be entitled to revoke such consent by providing written notice of revocation to VITL or to a Participating Health Care Provider with whom he or she has a provider/patient relationship. The Participating Health Care Provider shall promptly forward any such written notice of revocation to VITL. VITL shall effect such revocation of an individual's consent to opt in to the Exchange no later than 5 business days after receiving the notice of revocation.

Policy on Secondary Use of Identifiable PHI on VHIE

Definitions –

“Authorization” shall mean an individual’s act of giving specific written permission for the use or disclosure of his or her protected health information in a form which meets all of the requirements set forth in the HIPAA Privacy Regulations, 45 CFR § 164.508, including without limitation, an expiration date and notice of the individual’s right to revoke.

“*De-identified*” shall mean that all identifying information related to an individual as set forth in the HIPAA Privacy and Security Rule, 45 CFR Section 164.514 (b), are removed from the protected health information.

“Health Care Operations” shall mean activities of a Participating Health Care Provider providing treatment to an individual relating to quality assessment and improvement, evaluations relating to the competence of treating providers or necessary management and administrative activities all as defined in the HIPAA Privacy Regulations, 45 CFR § 164.501.

A “Participating Health Care Provider” means a health care provider, including any health care organization meeting the definition of a health care facility as defined in 18 VSA § 9402(6), who has executed an effective VHIE Data Services and Participation Agreement with VITL.

“Protected Health Information” (“PHI”) shall mean identifiable personal information in any form or medium about the past, present or future physical or mental health or condition of an individual as defined in the HIPAA Privacy Regulations, 45 CFR § 160.103.

“Quality Review” shall mean the review of PHI by health plans, insurance carriers or other third party payer for the purpose of disease management, case management or quality assessment or improvement.

“Treatment” shall mean the provision, coordination, or management of health care and related services by one or more health care providers.

Policy –

Identifiable PHI

Identifiable protected health information (“PHI”) shall not be made available on the Exchange for any purposes other than the treatment of the subject individual, payment related to that treatment or necessary health

care operations of the Participating Health Care Provider who accesses PHI for treatment purposes. Consequently, *Identifiable* PHI on the Exchange shall not be made available by VITL without the patient's specific Authorization and a use agreement between VITL and any health plan, insurance carrier or other third party payer for Quality Review.

Requests for *Identifiable* PHI to be released with an Individual's specific Authorization for any other purposes, including any of the purposes set forth below, will be considered by VITL, through its Executive Committee or its designee Committee, on a case by case basis as to whether *Identifiable* PHI shall be released and if so, under what use agreement restrictions:

- To any health plan, insurance carrier or other third party payer for payment or any purpose other than Quality Review
- To an employer for any purpose, unless the employer is a Participating Health Care Provider providing treatment to the individual, and the individual has provided consent to opt in to the Exchange;
- To anyone for the purpose of marketing products or services or for any other commercial purpose;
- To anyone for the purpose of research; or
- To any member of law enforcement without a court order or express requirement of law.

Any use agreement shall be at least as restrictive as the use agreement for Quality Review described below.

Authorizations and Use Agreements for Quality Review

In the event that *Identifiable* PHI is requested for Quality Review, VITL may provide access to *Identifiable* PHI on the Exchange of individuals who have signed an Authorization specifically permitting the health plan, insurance carrier or other third party payer ("Recipient Organization") to obtain access to their PHI on the Exchange. VITL and the Recipient Organization must have executed a written use agreement which obligates the Recipient Organization to the following provisions:

- To use and limit access to the *Identifiable* PHI only for the purpose of Quality Review;
- To agree to an Authorization form to be obtained from individuals, which complies with the requirements of 45 CFR § 164.508 and 42 CFR § 2.31 (relating to alcohol and substance abuse programs) and specifically sets forth the intended purpose;

- to agree to provide VITL access to the Authorizations upon reasonable request;
- to update its Notice of Privacy Practices to describe, when authorized by the individual, its use of his or her *Identifiable* PHI from the Exchange for Quality Review purposes only;
- to comply with all federal and state laws and regulations protecting the confidentiality of PHI;
- to designate staff who may access the Exchange for *Identifiable* PHI as authorized by individuals for Quality Review;
- to maintain policies and procedures for the appropriate access, training, and discipline of staff with regard to access to the Exchange for Quality Review;
- to maintain policies and procedures to prohibit any discrimination against an individual who does not authorize access to his or her PHI on the Exchange; and
- to comply with the VHIEN Policy on Privacy and Security Events.

De-identified PHI

In the event that *de-identified* PHI is requested for clinical research from data maintained for the Exchange, VITL, through its Executive Committee, or its designee Committee, shall review the request to determine if it should be approved. In making its determination, the Committee may consider any Institutional Review Board approval supporting the request. If approved, VITL, through an approved Data Subcontractor, shall prepare the *de-identified* PHI requested and shall be reimbursed for its expenses by the requesting party. The requesting party shall be required to provide contract assurances that no attempt shall be made by it to “identify” the *de-identified* PHI from the Exchange provided for the approved research.

VITL shall make available upon request an annual report of all approved requests for de-identified PHI from the Exchange, including the date of the de-identified data release, the entity to which the data was released, and a summary of the research involved.

Policy on Information Security

Definitions –

The “Vermont Health Information Exchange Network” (“VHIEN”) shall mean the health information exchange network operated by VITL.

A “Participating Health Care Provider” shall mean a health care provider, including any health care organization meeting the definition of a health care facility as defined in 18 VSA § 9402(6), that has executed an effective VHIEN Data Services and Participation Agreement with VITL.

“Protected Health Information” (“PHI”) shall mean identifiable personal information in any form or medium about the past, present or future physical or mental health or condition of an individual as defined in the HIPAA Privacy Regulations, 45 CFR §160.103.

“Technical safeguards” shall mean “the technology and the policy and procedures for its use that protect electronic PHI and control access to it.”

Policy –

Policy Overview

The purpose of the VITL Information Security Policy is to ensure that appropriate technical, administrative, and physical safeguards are applied end-to-end in the VHIEN, including VITL and participating providers. The policy draws upon industry-standard guidelines such as HIPAA Security Guidance and International Organization for Standardization (ISO) security practices. For VITL, the policy requires independent certification of security best practices at the “core” of the exchange. For Participating Health Care Providers, the policy requires that providers affirm compliance with the HIPAA Security Rule, and recommends a risk assessment process based on HIPAA requirements that allows providers to demonstrate the application of specific safeguards most appropriate to their size and function. End-to-end compliance with security practices is also enhanced by VITL-provided training, guidance, and technologies for automated compliance.

Ensuring Security of the Core Infrastructure

In a health information exchange, the core infrastructure includes the systems and personnel to operate the components at the center of the network. The core infrastructure shall be certified for compliance by at least one independent certifier of industry standard information security practices, such as the Electronic Healthcare Network Accreditation Commission (EHNAC). EHNAC is an independent, non-profit accrediting agency that evaluates an organization’s ability to meet standards and best practices. EHNAC certification includes a rigorous set of requirements aimed at HIPAA

transaction processors, clearinghouses, and data centers, in the areas of Privacy and Confidentiality, Technical Performance, Resources, and HIPAA Security. VITL shall publish and maintain core infrastructure certification information on its website.

Ensuring Security at the Participating Health Care Providers

Participating Health Care Providers, as HIPAA covered entities, must comply with HIPAA Security rules and HIPAA Security Guidance for Remote Use of and Access to Electronic Protected Health Information. This requires HIPAA Security practices to mitigate risk in three areas: Accessing Health Information, Storing Health Information, and Transmitting Health Information. Participating providers shall affirm compliance with the HIPAA Security Rule, including eight HIPAA-based practices listed in the Risk Assessment subsection below. VITL reserves the right to conduct a security audit of participating providers to demonstrate compliance.

Risk Assessment

Participating Health Care Providers are required by HIPAA Security Rule §164.308 (a)(ii)(A) to conduct an assessment of potential risks and vulnerabilities to the confidentiality, integrity, and availability of their electronic PHI. Based on the HIPAA requirements and Security Guidance published by the Department of Health and Human Services, VITL recommends that the risk assessment should include, but not be limited to, the following practices across eight subject areas:

1. Security policy and organization. Each Participating Health Care Provider should designate a Privacy Officer and Security Officer, and maintain a written security policy made available to all personnel with access to PHI. Confidentiality agreements should be utilized for third-parties with PHI access. The Privacy Officer and Security Officer should hold regular meetings with the management of the organization. They should develop processes for writing incident reports, regularly reviewing logs, end-user management including account creation, and patient inquiries.
2. Asset management. Each Participating Health Care Provider should maintain an inventory of health information assets containing PHI or with access to PHI such as laptops, desktops, servers, and removable media. A custodian should be identified to maintain the inventory, and rules should be written into security policy for acceptable use of the assets.
3. Human resources. Each Participating Health Care Provider should consider the information security impacts for employees joining, moving and leaving the organization. Job descriptions should indicate who has responsibilities related to PHI, and contracts with employees and contractors should include reference to information security policies, including information security-related disciplinary procedures. The

Participating Health Care Provider should have procedures for removing access to PHI upon termination of employment or contract. The Participating Health Care Provider should promote information security awareness through education and training for employees.

4. Physical and environmental security. Each Participating Health Care Provider should take reasonable steps to protect computer facilities and equipment containing or with access to PHI. Depending on the size of the organization, this may include establishing secure areas and deploying physical security measures for these areas. Where IT equipment is used off-premises, the organization should have policies for remote use of laptops or home computers. Procedures for secure disposal of IT equipment should be followed.
5. Communications and operations management. Each Participating Health Care Provider should take responsibility for the management of technical security controls in its systems and networks that are used to access PHI. The Participating Health Care Provider or its contractors should have documented operating procedures and formal change control process for implementing changes to systems or networks. Controls to prevent, detect, and respond to malicious software and network intrusion should be deployed. When stored on portable media, PHI should be tracked, and encrypted or protected from theft. A secure audit log should be created whenever PHI is accessed, created, updated, or archived. The auditing should be implemented at all times, and procedures for analyzing audit logs should be followed.
6. Access control. Each Participating Health Care Provider should take measures to limit access to networks, systems, applications, functions and data to authorized personnel. An access control policy should be established including password management procedures.
7. Information systems acquisition, development and maintenance. The Participating Health Care Provider should take steps to ensure that security is built into EHR and other clinical systems that store electronic PHI.
8. Information security incident management. Each Participating Health Care Provider should anticipate and respond appropriately to privacy and security related events such as breaches. Policies should be established for response to such events.

Secure Audit Logs

In addition to the audit logs kept by the provider for its own records, VITL shall maintain a comprehensive set of audit logs detailing accesses to the exchange. VITL audit policies, as described in the Auditing and Access Monitoring Policy, include regular review of audit logs by the VITL Privacy

Officer as well as delegated review of selected logs by the Participating Health Care Provider Privacy Officer. Procedures for follow-up on suspicious activity, such as indications of possible privacy or security breaches, are described in the VITL Privacy and Security Events Policy.

Detailed Guidelines and Training

No security policy can be successfully implemented without a training component. The Participating Health Care Provider Privacy Officer will be required to attend an online security training session sponsored by VITL. All VHIEN end-users must submit a written acknowledgement of security and privacy policies. VITL may also sponsor optional annual supplemental security training for all interested users.

In addition to this policy document, VITL shall periodically publish guidelines to assist with the implementation of the ISO best practices defined above.

Affinity Domain Policy

As described in the Vermont Health Information Technology Plan, the VHIEN is designed to be compatible with the Integrating the Healthcare Enterprise (IHE) architecture. IHE provides technical frameworks for the use of existing standards, reducing variability in their implementation. The integration profiles that make up IHE technical frameworks specify how standards should be used to achieve specific needs within the framework.

VITL shall publish and maintain on its website a detailed IHE Affinity Domain Interoperability Policy Agreement which will include technical details for statewide standard interoperability requirements and specifications including standard content, identification schemes, vocabularies, actors, and transactions to be supported by the VHIEN. These Cross-Enterprise Document Sharing (XDS) profile extensions are being defined statewide in Vermont and shall be followed by all VHIEN participants within the state. They will include further details in the following areas related to technical security, including:

- Authorization
- Role Management
- Definition of Functional and Structure Roles
- Identity Management Policy and Authentication of Users
- Attestation and Delegation Policy
- Node Authentication Requirements

Technologies for Automated Compliance

VITL shall utilize technologies for automated compliance with security policies where practical. For example, VITL may implement an automated system which would require the existence of a current antivirus software on the end-user's terminal before access is granted to the exchange. VITL may employ automated intrusion detection systems, and may request that

Participating Health Care Providers deploy similar software or participate in the application of these systems.

Procedures for Non-compliance

Procedures for non-compliance, including sanctions, are described in the Privacy and Security Events Policy.

Policy on Privacy and Security Events

Definitions –

A “Reportable Event” is defined as an action (or lack of action) that violates VITL’s policies and procedures for accessing or using protected health information on the Vermont Health Information Exchange Network. Such violations may be unintentional or intentional. Reportable events include any type of violation or breach involving the Vermont Health Information Exchange.

A “Breach” is defined as a Reportable Event involving the unauthorized acquisition, access, use or disclosure of protected health information on the Vermont Health Information Exchange which compromises the security or privacy of protected health information maintained by or on behalf of a person as set forth in 45 CFR § 164.402. Such term does not include:

- i. any unintentional acquisition, access or use of such information by a workforce member of the Participating Health Care Provider or its business associate if such acquisition, access or use was made in good faith and within the scope of his/her authority and does not result in further use or disclosure; or
- ii. any inadvertent disclosure from an individual who is otherwise authorized to access protected health information at a Participating Health Care Provider or its business associate to another individual authorized to access protected health information within the same Participating Health Care Provider or business associate; and any such information received as a result of such disclosure is not further used or disclosed; or
- iii. a disclosure of protected health information where the Participating Health Care Provider has a good faith belief that an unauthorized individual to whom a disclosure was made would not reasonably have been able to retain it.

The following examples distinguish the above terms:

- An example of a Reportable Event is a clinician sharing his user name and password with another clinician in the practice who had forgotten his own user name and password, and the clinician using the borrowed user name and password to access the health information exchange. This is a Reportable Event because it violates VITL’s privacy and security policies, which require each user to log in with their own authentication and will result in inaccurate audit logs and reports. It is not considered a Breach

because the privacy of protected health information was not compromised, as the clinician who borrowed the user name and password was also authorized to access the patient information on the exchange.

- An example of a Breach is a hospital registration clerk stealing a clinician's user name and password to gain unauthorized access to the Vermont Health Information Exchange Network, and printing out the clinical summary of the clerk's mother-in-law. This is considered a Breach because there was an unauthorized disclosure of protected health information which compromised the privacy of data maintained on behalf of a person.

An "Unintentional Violation" is defined as a violation of policies, procedures or law without planning or forethought. The violation may have been accidental in nature or due to a lack of training or understanding of requirements.

An "intentional violation" is defined as a deliberate violation of policies, procedures or law, conducted with planning or forethought.

The "Vermont Health Information Exchange Network" ("VHIEN") shall mean the health information exchange network operated by VITL.

A "Participating Health Care Provider" shall mean a health care provider, including any health care organization meeting the definition of a health care facility as defined in 18 VSA § 9402(6), that has executed an effective VHIEN Data Services and Participation Agreement with VITL.

"Protected Health Information" ("PHI") shall mean identifiable personal information in any form or medium about the past, present or future physical or mental health or condition of an individual as defined in the HIPAA Privacy Regulations, 45 CFR § 160.103.

"Unsecured Protected Health Information" shall mean PHI that has not been secured through the use of a technology or methodology standard as provided by federal law or guidance.

Policy –

Response to Reportable Events

Participating Health Care Providers are obligated to report all Reportable Events involving the Vermont Health Information Exchange to their organization's privacy and security officer(s) within ten (10) day of their

discovery, who will advise VITL of the Reported Event. VITL will establish and publicize one or more methods for filing reports.

Other individuals who have information about Reportable Events involving the Vermont Health Information Exchange are encouraged to file reports or complaints with VITL's privacy and security officer. VITL will establish and publicize one or more methods for members of the public who have information about Reportable Events involving the Vermont Health Information Exchange Network to file complaints.

Upon receipt of a Reportable Event Report or Complaint, VITL's privacy and security officer will log the Reportable Event, acknowledge receipt of the Reportable Event report or complaint to the person who filed it, inform the affected Participating Health Care Provider's privacy and security officer(s) of the event if they do not already have knowledge of it, and begin a review of the event to the extent that it involves the VHIEN. If it appears to VITL's privacy and security officer that there is an imminent threat to data security on the Vermont Health Information Exchange, VITL's privacy and security officer will take immediate actions to secure data.

The privacy and security officer(s) of the affected Participating Health Care Provider will cooperate with the Reportable Event review. Once the facts are gathered, VITL's privacy and security officer will determine whether a violation of VITL's privacy and security policies, procedures or relevant federal or state law has occurred.

VITL and the affected Participating Health Care Provider will collaborate to take steps to correct any weaknesses in their systems, policies, or procedures that were identified during the review. The privacy and security officer(s) of the affected Participating Health Care Provider will work with VITL's privacy and security officer to consider the need to develop a mitigation plan that is mutually acceptable. The mitigation plan should include steps to prevent the Reportable Event from reoccurring, and may include but not be limited to: additional employee training and education; facility and computer system changes; and policy revisions.

Upon completing the review, which shall be completed within thirty (30) days of notice to VITL, VITL's privacy and security officer will compile a final written report about the Reportable Event, communicating to the affected Participating Health Care Provider the facts gathered, the determinations made, any steps being taken to mitigate the event, and the measures being taken to prevent such an event from reoccurring. VITL's privacy and security officer will inform other complaint or report filers what actions were taken in response to the complaint/report. Whenever possible, this report will be in writing.

On a quarterly basis, VITL will conduct a review of all the events that occurred during the quarter to look for commonalities and opportunities for improvement. If any commonalities or opportunities for improvement are identified, VITL will take measures to address them. VITL will make a quarterly report summarizing the Reportable Events involving the VHIEN available to the Secretary of Administration or designee, including a trend analysis.

Upon request, VITL shall provide a report enumerating the warrants and subpoenas served upon it and/or the VHIEN for data on the VHIEN over the past twelve months. This report shall list the month and year the subpoena or warrant was issued, the issuing court, agency, or entity, and the individual or entity that caused the subpoena or warrant to issue and the status of the subpoena or warrant. Any subpoena or warrant issued at the behest of a non-government entity or individual shall be listed as being requested by a private party.

Breach Notification

In circumstances where it has been determined that a Reportable Event constitutes a Breach, VITL will notify the Participating Health Care Provider(s) whose patient information was subject to the unauthorized acquisition, access, use or disclosure no later than ten (10) business days following the discovery of the Breach. Such notification will include the time and date of the Breach discovery and the identification of each individual whose PHI is involved.

The Participating Health Care Provider, and/or VITL at the Participating Health Care Provider's request, shall notify, without unreasonable delay and in no case later than 60 days from the discovery of the Breach, each individual whose unsecured PHI has been, or is reasonably believed to have been, accessed, acquired, used or disclosed as a result of the Breach. Notification shall be provided in writing to each affected individual, or next of kin if deceased, by first class mail, or, if specified by the individual, by electronic mail. Notice shall also be provided to the Secretary of the U.S. Department of Health and Human Services in the form of an annual breach log submission as required by the Secretary. If the affected Participating Health Care Provider or VITL concludes that there may be imminent misuse of an individual's PHI, notice shall also be provided by telephone contact or other means, as appropriate. If the unsecured PHI of more than 500 individuals is affected by a Breach, notice shall also be provided to prominent media outlets serving the area and contemporaneously to the Secretary of U.S. Department of Health and Human Services.

In the case in which there is insufficient or out-of-date contact information (including a phone number, email address, or any other form of appropriate

communication) that precludes direct written (or, if specified by the individual, electronic) notification to the individual, a substitute form of notice shall be provided. In the case that there are 10 or more individuals for which there is insufficient or out-of-date contact information, the involved Participating Health Care Provider will provide notice by arranging for a conspicuous posting on the home pages of the Web site, if available, of the Participating Health Care Provider involved and of VITL and/or notice in major print or broadcast media where the individuals affected by the breach likely reside. Such a notice in media or web postings will include a toll-free phone number to either the Participating Health Care Provider and/or VITL, as mutually agreed upon, where an individual can learn whether or not the individual's unsecured protected health information is possibly included in the breach.

The notification to the affected individual(s) will contain, to the extent possible, the following:

1. A brief description of what happened, including the date of the Breach and the date of the discovery of the Breach, if known.
2. A description of the types of unsecured protected health information that were involved in the Breach (such as full name, Social Security number, date of birth, home address, account number, or disability code.)
3. The steps individuals should take to protect themselves from potential harm resulting from the Breach.
4. A brief description of what the Participating Health Care Provider and VITL are doing to investigate the Breach, to mitigate harm to individuals, and to protect against any further Breaches.
5. Contact procedures for individuals to ask questions or learn additional information, which shall include a toll-free telephone number, an e-mail address, Web site, or postal address.

If a law enforcement official determines that a notification required under this Policy would impede a criminal investigation or cause damage to national security, such notification shall be delayed in the same manner as provided under section 164.412 of title 45, Code of Federal Regulations.

Mitigation, Corrective Action and Sanctions

Upon receiving a report or being notified of a Reportable Event, VITL will work with the affected Participating Health Care Provider(s) to develop a mutually acceptable mitigation and correction plan.

If it is determined by VITL's privacy and security officer that a Reportable Event or a Breach has occurred involving the VHIEN, VITL may impose on the offender one or more sanctions, consistent with the violation. Depending on the circumstances, sanctions may be on an individual level or an organizational level. Sanctions for an unintentional violation may include, but are not limited to: verbal warnings; written warnings; suspension of VHIEN access privileges; and revocation of VHIEN access privileges. Sanctions for an intentional violation may include, but are not limited to: immediate suspension of VHIEN access; revocation of VHIEN access; a complaint filed with the violator's professional licensing board, if the violator is professionally licensed; information turned over to a prosecutor for criminal prosecution; and potential other legal action.

Appeals

Offenders may appeal sanctions to VITL. All appeals must be filed in writing, and received at VITL's business offices within 10 business days of the sanction being imposed. VITL staff will consider the appeal and make a determination of whether to continue the sanction within 10 business days of receiving the written appeal. VITL will provide the party filing the appeal with a written notice of its decision within 10 business days of making the decision. Sanctions will remain in effect while the appeal is being considered.

If the appeal is denied, and the appealing party believes there has been an error, it may file a request with VITL for an external review. Such requests must be made in writing within 30 calendar days of the appeal being denied. VITL will refer the case to an independent party, which will review the evidence and make a recommendation to VITL's board of directors, which will make the final decision.

Policy on Auditing and Access Monitoring

Definitions –

The “Vermont Health Information Exchange Network” (“VHIEN”) shall mean the health information exchange network operated by VITL.

A “Participating Health Care Provider” shall mean a health care provider, including any health care organization meeting the definition of a health care facility as defined in 18 VSA § 9402(6), that has executed an effective VHIEN Data Services and Participation Agreement with VITL.

“Protected Health Information” (“PHI”) shall mean identifiable personal information in any form or medium about the past, present or future physical or mental health or condition of an individual as defined in the HIPAA Privacy Regulations, 45 CFR §160.103.

“Unsecured Protected Health Information” means PHI that has not been secured through the use of a technology or methodology standard as provided by federal law.

“Audit” means an individual’s act of reviewing and examining records of activity related to the records of access and use of the VHIEN by participating health care providers.

“Audit Logs” means system generated reports based on logging and recording transactions sent and received, access records (including denied access), and other information related to tracking use and access by Participating Health Care Providers in the VHIEN.

Policy –

1. Audit logs shall be generated by the VHIEN, by the Participating Health Care Providers’ EHR systems, and by other computer software and systems that communicate with the VHIEN to access, store and communicate personal health information about individuals who have opted in to the VHIEN.
2. Audit logs accessible by Privacy Officers of Participating Health Care Providers shall be restricted to records of access by the Participating Health Care Provider.
3. VHIEN Audit logs shall be reviewed on a routine basis by the VITL Privacy Officer and by the Privacy Officer of Participating Health Care Providers. Any suspicious activity discovered by VITL shall be reported to the Participating Health Care Provider and VITL shall generate a Reportable Event report. Any suspicious activity discovered by a Participating Health

Care Provider shall be reported to VITL; VITL shall generate a Reportable Event report as per the VITL Privacy and Security Events Policy. The VITL Privacy Officer shall specifically review audit logs to detect intrusion attempts and patterns of access to the VHIEN.

4. VHIEN Audit logs shall be reviewed by VITL and Participating Health Care Provider as needed to follow up on inquiries from providers and patients regarding accesses and use of the VHIEN.
5. As per the Policy on Information Security, Participating Health Care Providers are expected to create secure audit logs whenever PHI is accessed, created, updated, or archived via an EHR or other information system. Audit logging shall be implemented at all times and procedures for analyzing audit logs shall be provided and used by the provider.

VHIEN Audit Logs

A secure audit log shall be created whenever PHI is accessed, created, updated, or archived via the exchange. Audit logging shall be implemented at all times, and procedures for analyzing audit trails shall be used by the VITL Privacy Officer and Participating Health Care Provider Privacy Officers.

VITL Privacy Officer and Participating Health Care Provider Privacy Officers shall be provided with facilities for analyzing logs and audit trails that:

- allow the identification of all VHIEN users who have accessed or modified a given subject of care's PHI in the VHIEN over a given period of time, and
- allow the identification of all subjects of care whose PHI has been accessed or modified by a given VHIEN user over a given period of time.

Audit logs shall be secure and tamper-proof. Access to system audit log analyzing tools and audit logs shall be safeguarded to prevent misuse or compromise.

For transactions sent to or from the VHIEN, the audit system shall record:

- sender identifier
- date and time of event
- system component where the event occurred
- type of event or transaction
- outcome of the event (success or failure)

For user access events, the audit system shall record:

- user identifier
- date and time of event
- system component where the event occurred
- type of event
- outcome of the event (success or failure)

For granting/revoking access to the VHIEN the audit system shall record:

- user identifier
- date and time of event
- system component where the event occurred
- type of event (authorization, revocation, password change)
- outcome of the event

All access and transaction logs shall be kept for six years.

Patient Request for Audit Report

An individual may request an audit report of access to his or her PHI on the VHIEN, for a period no longer than three years prior to the date of request, by contacting VITL's Privacy Officer. VITL shall provide the requested Audit Report within 30 calendar days, and it shall provide the following information pursuant to 45 CFR § 164.528(b):

1. The date of disclosure;
2. The name of the Participating Health Care Provider and/or user or other person who received the protected health information and, if known, the address of such entity or person;
3. A brief description of the protected health information disclosed; and
4. A brief statement of the purpose of the disclosure.

Appendix C:

Vermont Agency of Human Services IT Modernization/HIE Integration Opportunities

Tier 1:

- 1.1: VIEWS -Vermont Integrated Eligibility Workflow System**
- 1.2: Vermont State Hospital – Electronic Health Record**
- 1.3 Enterprise Master Person Index (EMPI)**
- 1.4 HIE: HL7 Electronic data feeds into VDH Registries**
- 1.5 HIE: HL7 Electronic Lab Reporting (ELR) for Infectious Diseases**
- 1.6 VDH 1032 Stabilization**
- 1.7 WIC EBT**
- 1.8 Medicaid interface with VHCURES multi-payer database**
- 1.9 Vocational Rehabilitation Case Management System**
- 1.10 Real ID Implementation**
- 1.11 SIREN - EMS Incident Reporting System**
- 1.12 Town Health Officer Database**
- 1.13 HIE: HL7 Electronic Lab Reporting (ELR) - Cancer Registry**
- 1.14 Lead EMP Compliance System**
- 1.15 APS Investigation Management System**
- 1.16 Update EMRs for IZ & transmission to VHIEN**
- 1.17 DOC Forensics**
- 1.18 Program dependent changes and enhancements**

Tier 2:

- 2.1 VDH Computerized Provider Order Entry (CPOE) for lab tests**
- 2.2 AHS Network enhancements**
- 2.3 Computing and storage enhancements**
- 2.4 Integrated Case Plan**
- 2.5 Expand Statewide licenses for DocSite**
- 2.6 Security and Privacy enhancements**
- 2.7 Integrated Children's services**
- 2.8 Upgrade to SAMS**
- 2.9 Veterans Jail Diversion extension**
- 2.10 EMS Certification System Replacement**
- 2.11 Office of Child Support financials system**
- 2.12 CIS Billing to EDS**
- 2.13 Extend MH EHR to Designated Agency Partners**
- 2.14 Expansion of mobile technology**
- 2.15 Expand statewide licenses for DocSite**
- 2.16 Program dependent changes and enhancements/IT system modifications**

Tier 3:

- 3.1 Imaging expansion to health care**
- 3.2 e-Portal / Unified Sign-on**
- 3.3 CSME Expansion**
- 3.4 AHS Electronic Health Record**
- 3.5 ADAP Treatment and Prevention Reporting**

- 3.6 WIC Replacement**
- 3.7 SSMIS replacement**
- 3.8 CJIS connectivity with Health Information**
- 3.9 Fuel-EBT**
- 3.10 ACCESS Replacement**
- 3.11 Real time prior authorization for services**
- 3.12 Program dependent changes and enhancements**

All of these identified opportunities will be addressed through the SMHP development process, which will also include updated Vermont's recently completed MITA and potential adjustments to the state P-APD for MMIS.

Appendix D:

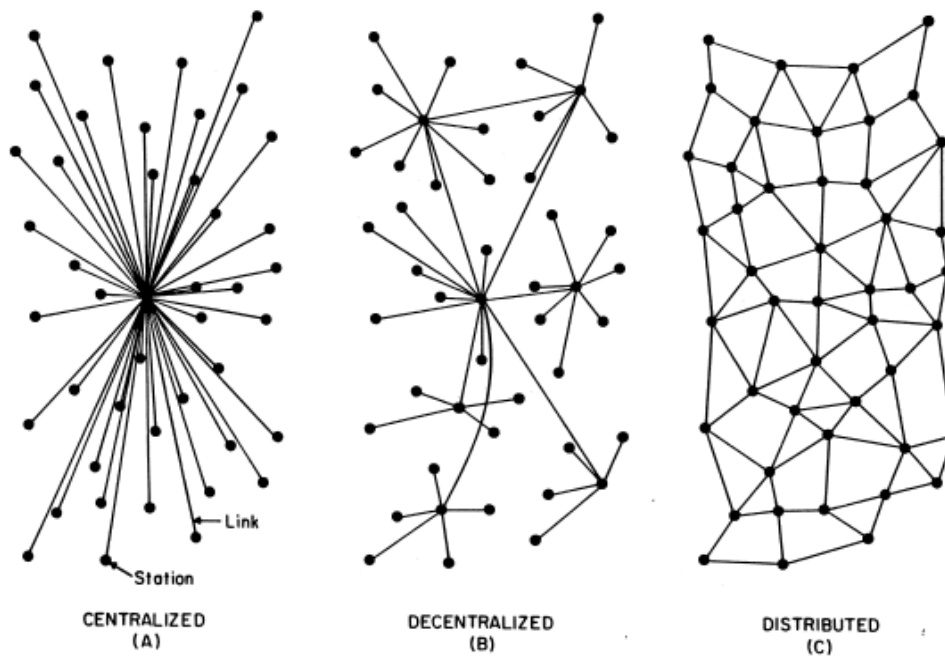
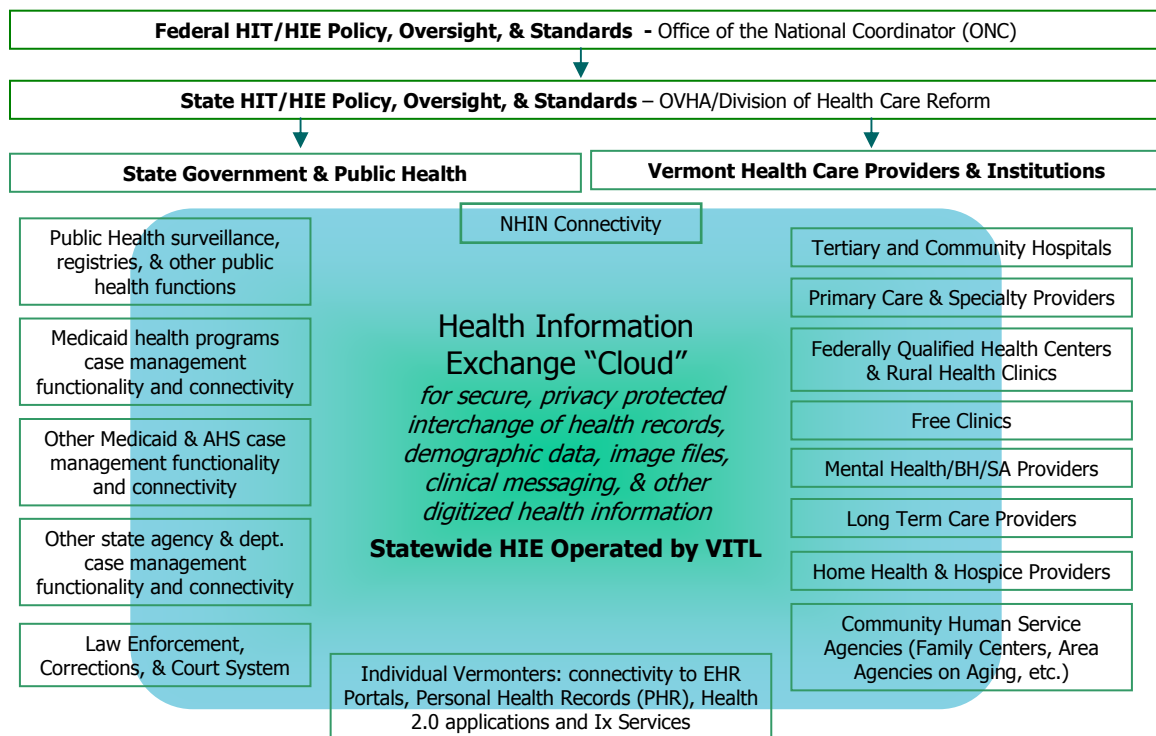
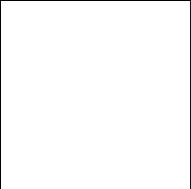


FIG. 1 – Centralized, Decentralized and Distributed Networks

Ubiquitous, secure exchange of health information enables connecting the disparate dots of the health care delivery system. Providers, practitioners, and professionals can connect to each other, to individual patients, families, and support staff and systems.





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